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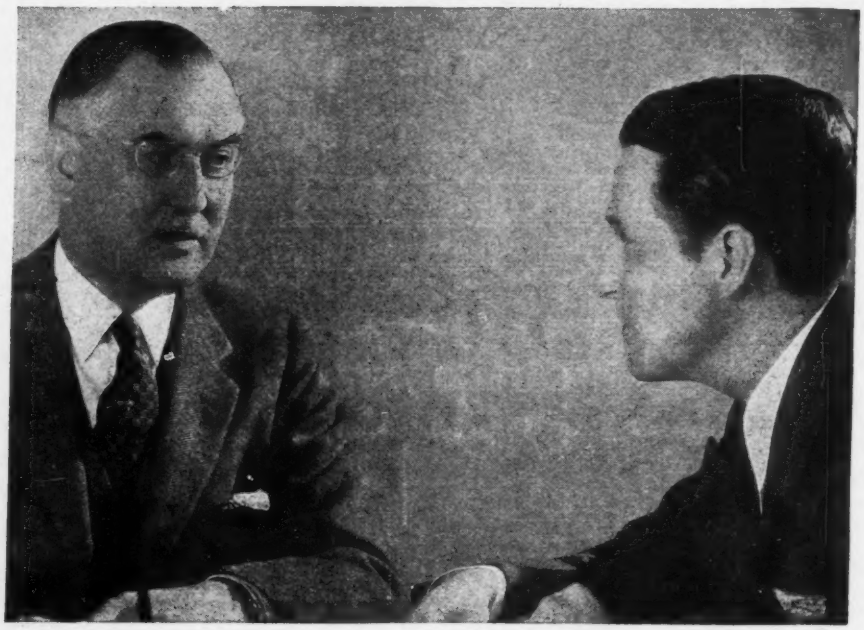

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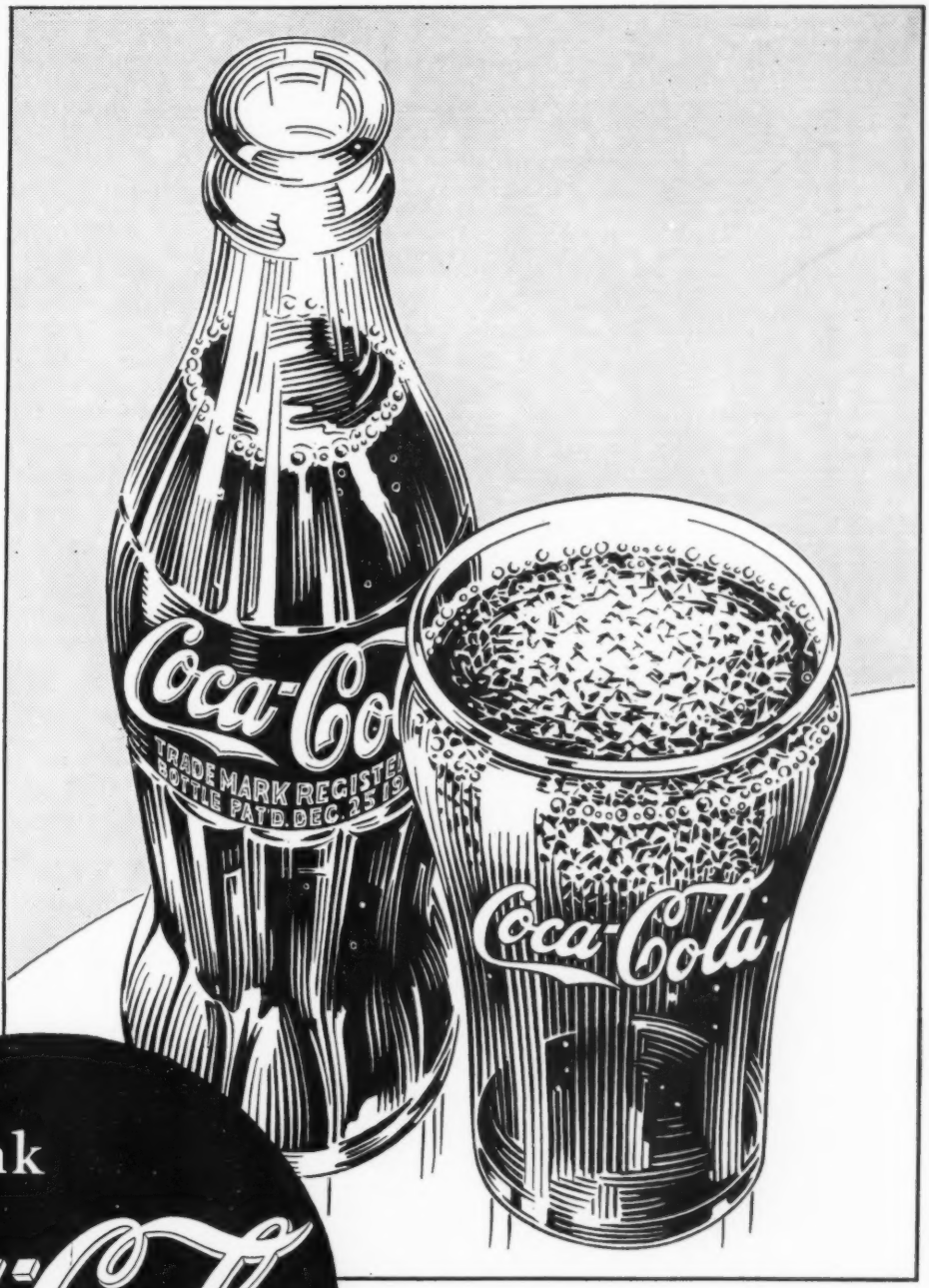

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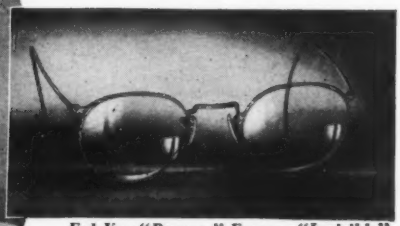

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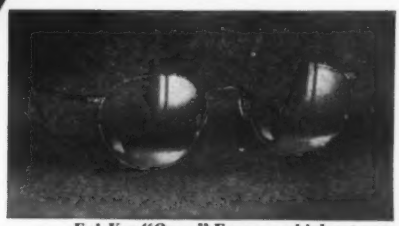

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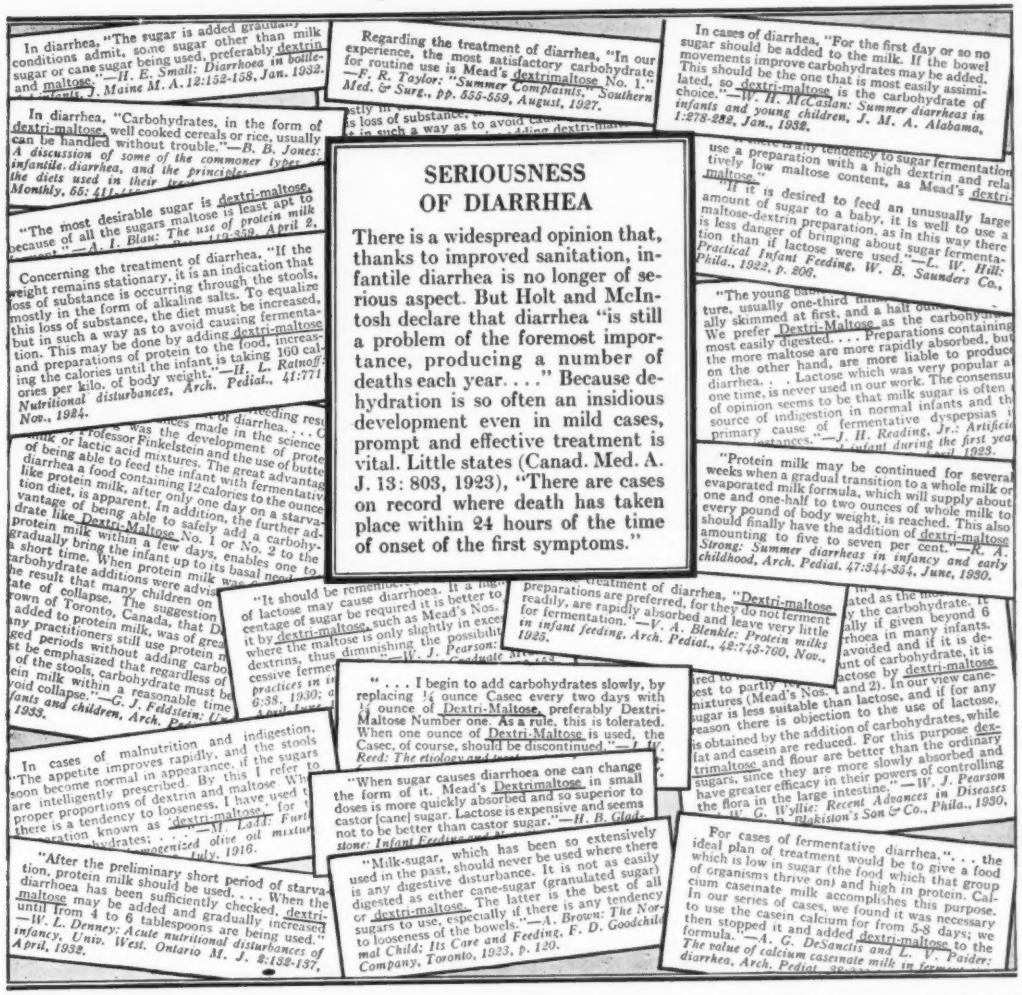
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HYPOGLYCEMIC SHOCK THERAPY IN DEMENTIA PRAECOX*

H. Mason Smith, M. D.,
Tampa.

Reports from several European clinics of the marvelous results obtained in the treatment of dementia praecox through the use of hypoglycemic shock therapy have gained much publicity in the lay press and have aroused widespread interest and enthusiasm within the medical profession. In consequence, the Committee on Public Education of the American Psychiatric Association deemed it expedient to issue a statement warning both the public and the profession regarding this new therapy. In this warning, concurred in by all members of the committee and also by Dr. C. Macfie Campbell, president of the association, it is stated that the impression that there is no effective treatment for dementia praecox is erroneous. As quoted in the Journal of the American Medical Association, February 13, 1937, this pronouncement further stated that insulin shock treatment is being studied in the state hospital systems of New York and Massachusetts, in Bellevue Hospital, New York, and in other scientific centers and is to be undertaken only by physicians adequately trained to cope with its dangers.

When the statistics of the European clinics show that three-fourths of the patients who have been ill less than half a year are completely recovered under this therapy and that over 69 per cent of those who have been ill less than a year and a half are benefited to such an extent that they are able to return to their work, becoming productive, socialized individuals, it is but a perfectly natural sequence that this method of treatment be given the publicity and extensive trial it should receive. In cases of dementia praecox the spontaneous recoveries number less than 10 per cent, and the remaining large group consists of chronic and incurable patients with a very long expectancy as custodial insane persons, most of whom become charges of the state. In view of these facts every parent whose child has recently developed dementia praecox is entitled to know the use now being made of this new therapy and the promise it holds out for recovery. To wait until the conservative gentlemen from the East have satisfied themselves on every point is analagous to postponing a call to the fire department while the house burns down, in order that some eastern engineers may pass on equipment that has been used satisfactorily elsewhere. Although the treatment is attended with grave dangers, any parent or physician who is acquainted with the progressive and chronic nature of this disease would certainly be glad to take the chance involved, for practically anyone would agree that death is decidedly more merciful to an individual than a lifetime of acquired feeblemindedness brought about by the ravages of this dementing process.

As to the statement that there are other treatments for dementia praecox, there is none that has ever proved effectual. In the treatment of this disease, as with poliomyelitis, multiple sclerosis, the primary muscular atrophies and other diseases with obscure etiology, many therapies have been proposed and tried, but so far no treatment other than that of hypoglycemic shock has proved efficacious for it.

In 1933, Manfred Sakel,[1] a young Viennese physician, observed that narcotic addicts, under treatment for diabetes, who experienced reactions from insulin, had no withdrawal symptoms while in the shock or pre-shock period and for some time following. He developed the simple hypothesis that the withdrawal symptoms were a sign of general nervous hyperactivity such as he saw in hyperthyroidism; that the nervous system was continually exposed to the activity of circulatory hormones, especially the hormone of adrenalin, and that the withdrawal symptoms were therefore due to nervous hypersensitivity or to an excess of excitant hormones. In either

*Read before the Sixty-fourth Annual Meeting of the Florida Medical Association, held in St. Petersburg, April 5, 6 and 7, 1937.

case, a reduction of adrenalin should, he felt, have a quieting effect. He used insulin as an antagonist to counteract the hyperactivity from the adrenalin. Whatever the real answer, the practice proved effectual in narcotic cures. The same hypothesis was also applicable, he thought, to psychosis; so he began to apply it to schizophrenics. The response of the first few schizophrenics was sufficiently gratifying to justify and encourage further research. With these patients, however, he carried the hypoglycemic state so far as to produce shock while in the cases of narcotic withdrawal, he did not give the patients such massive doses of insulin. In treating schizophrenics, hypoglycemic shock is the criterion, the instrument which produces the benefit.

RESULTS

In estimating the results of this treatment, practically all of the research workers have considered a complete recovery as meaning one thing only, complete and total rehabilitation of the personality including affectivity and also capacity for work. A "good recovery" means that the patient is able to leave the hospital and return to his profession or occupation, but there may be a few residuals. A "social recovery" means that the patient may not return to his profession, but is able to remain at home and work without supervision at a simpler occupation. Other than these, cases are not recorded as recoveries. The word "improvement" is in the field of psychiatry such an intangible and unmeasurable term that it is left out altogether in estimating results. When a patient does not attain a social recovery, the treatment is regarded as a failure in that case.

The first statistics available were tabulated and published by Dussik and Sakel[2] in 1936 and comprised 104 cases. Fifty-eight were recent cases and forty-six were of six months' duration or more. In the fifty-eight recent cases, 88 per cent of the patients made good recoveries, enabling them to return to work; 70.7 per cent made complete recoveries. In 19.6 per cent of the forty-six older cases complete recovery was attained, and social recovery in 47.8 per cent of this number. These cases were discharged as cured and others taken in for treatment. The "follow-up" showed that fifteen of the patients making good recoveries had remained well a year, and thirty-four others were still well at the end of half a year. Three making complete recoveries, five making good recoveries and one making a social recovery had relapsed at the end of a year. Of these nine, five were again placed under treatment; three made good recoveries, one was benefited and one was still under treatment. In this series there were three deaths, one from coronary thrombosis and two from pneumonia following aspiration. In one of the latter cases pancreatic necrosis was found.

Addressing the Bern-Stadt Medical Society on February 13, 1936, Mueller[3] summarized the work done in Switzerland. Of the seventy-five cases reviewed, 48 per cent or thirty-six patients showed complete recoveries. Of this number, twenty-six had been ill less than half a year, nine between half a year and a year and a half, and one more than a year and a half. So in all these reports the recent cases showed more response to treatment than the older ones. In fact, of the thirty-six complete recoveries in this series, 76 per cent were recent cases. Total failure occurred in only eighteen of the entire seventy-five cases.

Since this report was made, 118 cases[4] have been tabulated in Swiss clinics. Seventy-eight of the patients in these cases were ill a year and a half or less, and 68 per cent of this number made complete recoveries. In forty the duration of the illness was more than a year and a half, and out of that number two made complete recoveries, sixteen made social recoveries and twenty-two were not benefited. Hoff[5] reported later on 200 cases treated in the Vienna Polyclinic. In this series 70.7 per cent of the patients made full and complete recoveries, revealing not the slightest residue of schizophrenia upon closest examination. In the earlier cases the proportion of recoveries was 86.2 per cent, and in the older cases 45 per cent. The mortality rate was 1.5 per cent, or three deaths in 200 cases. Sakel[6] now has record of 300 cases.

In this country there have been practically no reports of this treatment as it has not been in use sufficiently long to justify them. Steinfeld,[7] of Peoria, Illinois, observed the treatment in three old cases in which results were negligible. Glueck[4] reported the privilege of following through twenty cases while visit-

ing European clinics last year. Dr. John R. Ross, Superintendent of the Harlem Valley State Hospital, Wingdale, New York, where the treatment is in use, stated: "Improvement has occurred in a number of cases; from the twenty cases that have been receiving treatment we are now ready to send eight home for trial and possibly more at a later period."[8] No doubt in a few months many clinics will have tabulated reports.

My personal experience with the treatment has not been large for it has been limited to six unselected cases in which shocks were produced. It has, however, been sufficient to justify the claim that this therapy can be successfully carried out in a well equipped general hospital, thereby saving the necessity of committing the patient, an important factor to many people.

METHOD OF ADMINISTRATION

In the first of four phases into which Sakel' divided the treatment, the patient is given from 12 to 20 units of insulin, and the amount is increased 5 or 10 units each day. The initial dose is usually given in the morning at six or seven o'clock on an empty stomach, and the patient is kept in bed without food, although water is allowed throughout the treatment as the patient desires it. After four or five hours have elapsed, 150 grams of sugar are given in some liquid, such as milk, tea or coffee. If this first dose of insulin brings about excitement, another dose is given at two o'clock. This treatment is continued six days a week with one day allowed for rest. During this phase of the treatment, hypoglycemic symptoms begin to appear with increasing severity as the dose of insulin gets larger. These symptoms are profuse sweating, increased flow of saliva which is viscid, and tremors and twitching of the muscles in the face and lower extremities. As far as I can learn the patient has a subjective sensation of well-being. Occasionally there occur oppressed feelings around the heart with pounding and also a state of anxiety. This phase ends when the dose of insulin has become sufficient to produce hypoglycemic shock.

When the dose is sufficient to produce the pre-shock stage, there is usually an activation of the psychosis. In some patients it occurs in reverse form. A catatonic who has been mute for years may under shock doses of insulin become somewhat talkative and excited for an hour or two before going into shock.

The second phase of the treatment is arbitrarily determined when the patient goes into shock. It is the most important phase and is reached when the dose of insulin produces a degree of coma in which the patient is no longer able to drink soluble solutions and nasal feeding or glucose administered intravenously has to be resorted to, or when the patient is threatened with a convulsion. When profuse perspiration occurs during the coma, the shock is designated as a "wet shock." The patient who does not perspire is more likely to have a convulsion at the onset of or during the hypoglycemic coma. A convulsion indicates that the shock should be terminated by neutralizing the insulin.

During this phase of the treatment the attendants should be ready for all emergencies, and a physician should be in constant attendance. Adrenalin should be conveniently at hand, already in a syringe; a Levine feeding should be prepared and ready for administration; glucose for intravenous injection should be readily available; also, within easy reach there should be cardiac and respiratory stimulants such as coramine and caffeine. When the patient reaches a state of shock, the somnolence passes into a coma of variable depth, and he cannot be aroused by shaking. The normal reflexes are abolished, and pathological reflexes are found present. In deep shock there is a total abolition of reflex activity. The patient becomes pale; often marked bradycardia is present and there occur tremendous fluctuations in blood pressure, which may range from 180 to 90 in five minutes; also marked twitching and clonic movements occur.

It has been difficult to determine the length of time the coma should be maintained. It is probably desirable to continue it as long as the patient's physical state indicates to the physician that everything is moving well. At present, however, the consensus is that it should be maintained from four to six hours and interrupted at any time if there is cardiac or respiratory embarrassment.

The number of shocks to be given is determined by the progress of the patient. When there is no activation of the psychotic symptoms during the pre-shock period and

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when there is a normal behavior with a disappearance of all the schizophrenic characteristics, this phase of the treatment is terminated.

The third phase consists of a rest period given one or two days each week and sometimes longer. In old cases after thirty or forty shocks have been given, a period of rest for sixty days is sometimes allowed. One of my patients, who has had thirty-five shocks, is now resting for sixty days and will then return to the hospital so that I may repeat the treatment.

The fourth phase is termed by Sakel[1 2] the "polarization phase." It consists in giving insulin once or twice a day in less than shock doses and neutralizing these doses two hours later. It is really a tapering-off process. This phase usually requires a week or ten days, and during this time the patient becomes oriented and adjusted to the withdrawal of insulin.

The variability of the reaction of the individual patient and of different patients to insulin is amazing. This difference of sensitivity probably depends on the insulin antagonist, adrenalin, and also on pituitrin, which in turn affects the progress of the hypoglycemic state. According to Sakel, [1 2] old cases of schizophrenia seem to be more resistant to the effect of insulin than recent ones. He has carried this idea to the point of claiming that he can tell the duration of the schizophrenic disorder from the patient's responsiveness to insulin. In one case in my series, the patient walked around the hospital after receiving a dose of 310 units. In other cases we obtained a shock following the administration of 25 units. The latter were, of course, recent cases, and the illness of the catatonic who tolerated the large amount was of ten or twelve years' duration.

It has already been brought out that this treatment involves dangers considerable in degree. In my personal practice there have been many difficulties. In the first case, which was treated before the literature had been studied, we at one time produced such a deep coma that the administration of glucose intravenously did not bring the patient back to consciousness. In most cases the accumulation of a thick viscid mucoid saliva offers a problem, and ever present is the danger of pneumonia following aspiration, which one of my patients experienced. The patients are sometimes set up in bed so that the flow into the stomach will be easier. The suction machine is used, and atropine is freely administered. Adrenalin reduces the shock and is not used unless a convulsion or a circulatory disturbance is threatened. Bronchoscopic suction has not been used, but arrangements have been made for its use with the next patient who aspirates.

There is no value in determining the blood sugar content in the hypoglycemic state as it is of no use in determining the amount of insulin to be administered. The deepest stage of the coma does not correspond to the lowest blood sugar content. It is considered that the hypoglycemic symptoms are not due to hypoglycemia as such, but to the individual reaction to insulin, that is, to the compensatory secretion of adrenalin. Whether this reaction is considered as primarily toxic or secondarily conditioned by the hypoglycemia is problematical.

Tremor, pounding of the heart and a sense of oppression are symptoms considered due to adrenalin, whereas weakness and sweating are regarded as the direct result of hypoglycemia. The convulsions are manifestations also probably due to adrenalin. One of the most serious difficulties is the epileptic convulsion. There are, however, other complications, such as circulatory collapse, glottal spasm and vomiting during the stage of unconsciousness, but with these I have fortunately not had to contend. There is also the possibility of after shock, which no doubt occurred in the first case of my series, in which the patient remained in a coma for more than forty hours. One has to deal here with a spontaneously developing hypoglycemia, which sets in a few hours after the induced hypoglycemic state has been neutralized.

In view of the fact that internists have had disastrous experiences with spontaneous hypoglycemia in the treatment of diabetes and that cardiac failure has been the cause of death in insulin shock, the heart deserves special attention in the production artificially of the hypoglycemic state. In practically all hypoglycemic states tachycardia is observed. It may persist afterward for a number of hours, but it disappears within twenty-four hours. Occasionally bradycardia is present, the pulse becoming very slow. The three essentials to

perfect cardiac function are: sugar, insulin and oxygen. If the sugar content of the blood is reduced too much, there is danger of lasting injury to the heart. Emphasis must be placed on the point that the circulatory system is to be guarded most carefully during insulin therapy, and patients suffering from heart disease or coronary disease should not have the treatment. Persons in the arteriosclerotic period of life are in great danger when subjected to this therapy. Fever is a contraindication.

THEORY OF INSULIN SHOCK

There has been no satisfactory explanation of the biochemical reaction in insulin shock that brings about the improvement in the psychosis. It is hoped that when this reaction is known, the etiology of dementia praecox will become known. Wortis[1] presented Sakel's views and tentative working theory as follows: "(1) Insulin shock stimulates metabolism in general and liver function in particular, so that toxins are eliminated; (2) insulin shock, like any other shock, revives strong, primitive, normal responses and eliminates recent abnormal ones; (3) insulin has a specific vagotropic action. Sakel pictures schizophrenia as a state in which nerve impulses travel fast and free and fly, so to speak, off the handle. Insulin inhibits and blockades the nerve cell, so that the nerve pathway patterns, like jurymen locked in a room, finally come to order. The seat of action, he believes, is the vegetative centers."

My personal view is that the brain is dependent on carbohydrates for nutrition and that in schizophrenia the carbohydrate metabolism is low. Insulin drives the sugar from the blood stream into the deep organs and improves the carbohydrate metabolism of the brain. By animal experimentation Yamada[9] has shown that insulin diminishes production of lactic acid in the brain by promoting conversion of lactic acid into glycogen, a finding which indicates that the potentialities of research in this field are great.

In the later stages of treatment the patients are susceptible to psychic influences, and the psychic effects of coma and shock may indeed be factors of considerable import in the treatment. Psychotherapy in these stages is certainly of benefit.

FUTURE OF THE THERAPY

If the clinics of this country in administering this treatment meet with the success the European clinics have had with it and obtain as high a percentage of recoveries that remain permanent or even measurably so, the discovery of this therapy will constitute, because of its far-reaching medical and social implications, one of the greatest advancements of medicine. Physicians who have worked in psychopathic institutions will agree that there is nothing more tragic than to see the hopes of parents blighted by the development of schizophrenia in a child who has shown evidence of brilliance and even genius.

The present population of state hospitals is composed largely of schizophrenics who went to these institutions as young people and have continued to remain there, buried in custodial care and having a rather lengthy expectancy of life. Their care has, of course, been a tremendous expense to the respective states. According to reports of the federal census, during 1934 there were 150,000 patients suffering from dementia praecox in state hospitals alone without reference to private institutions. The federal census for 1935 showed a total of 19,149 new cases of dementia praecox committed that year. Successful treatment of this disease will effect tremendous economic savings and will solve to some extent the problem of overcrowding that has bothered all state hospitals.

It is reasonable to assume that producing the hypoglycemic state is not necessarily specific for schizophrenia, and already it has been used successfully by me in some cases of neurosis that have been under my care for years. Its use with success has been reported in a few cases of menopausal depression and a few cases of compulsion states.

With experience in handling patients under this treatment in a well equipped hospital, it is possible to modify its dangers. The treatment should, of course, not be undertaken without due caution and proper facilities. It can be carried out successfully in any general hospital that contains a good psychopathic ward with a trained personnel of physicians and nurses, and the necessity of committing many patients to state institutions may thus be relieved.

Regarding possible injurious physical se-

quelae owing to repetition of the insulin shocks nothing definite has as yet been published. Certainly while undergoing treatment the patients appear to be in excellent physical condition and usually gain weight. Beyond a sense of fatigue, they have practically no discomfort during the time they are not in a hypoglycemic state. Apart from certain guiding principles, the therapy is individual in character, and the director of the treatment will have to be guided by intuition and good judgment in determining the depth of the shock and the number of shocks to be administered.

CASE REPORTS

Case 1.—A truck driver, white, aged 20 years, was admitted to the Tampa Municipal Hospital December 16, 1936. Except for the removal of tonsils and adenoids, his medical history was negative. Always somewhat seclusive in disposition, he was brilliant in his studies. He was at the time of admission in a somewhat disturbed mental state. He stated that while driving his truck, he would be unable to remove his eyes from a house or other object on which his gaze chanced to fall, and that his mind would not tell him he was physically fatigued, leaving him to find out two or three days later when his body felt very weak. He was deeply concerned, he said, about the Bible, which until six months previously he had been unable to understand but now comprehended fully in all its various injunctions and commands. Believing he had been gassed in order to be put to sleep the first night in the hospital, he held his neck because he thought the gas had injured it. He also thought he was being treated by electricity and that waves were passing through his body. He felt that he was all right, but that things without were disordered and that certain people could in a way tell all that was going through his mind. He was grimacing and displaying peculiar mannerisms, and emotional poverty was evidenced by his inability to enjoy anything pleasant. He was indifferent to his environment, showing no concern about being in the hospital or going to the state hospital. Except for vagotonia, physical examination was negative.

Exceedingly anxious to avoid commitment for this young man, his family was highly desirous of keeping him in the Tampa Municipal Hospital as long as they were financially able to do so. On being informed of a new therapy, they were so insistent that it be tried that we finally agreed to administer insulin shocks although we had not yet had the benefit of reading the literature pertaining to the method of administering this treatment.

On the first morning the patient was given 20 units of insulin on an empty stomach, on the second morning 35 and on the third morning 55 units without reaction. In order to produce a shock without using more of the drug than necessary, it was decided to give the insulin every two hours until he lapsed into coma. At eleven o'clock on the night of December 24, after receiving 172½ units at intervals of two hours, he went into a coma, and two hours later had an epileptic seizure of eight minutes' duration. Following the convulsion his circulation was, however, so good that the shock was not interrupted, and he was allowed to remain in the coma for four hours.

The next morning the patient was perfectly normal in all respects. The schizophrenic symptoms had disappeared, and he had sufficient insight to analyze and discuss them. As he remained normal and so little was known about the treatment, he was sent home on December 27. Eight days later the symptoms returned, becoming as pronounced as at first, and the patient was readmitted to the hospital on January 7.

Still unable to procure the literature on the new treatment, we produced shocks by giving the patient 60 units of insulin at six o'clock in the morning and 40 units two hours later. In this way four "wet shocks" were obtained and interrupted without difficulty, the patient showing daily improvement. Following the fifth shock, there was difficulty in bringing him out of the coma. Fifty cc. of 50 per cent glucose were administered three times at intervals of two hours. Adrenalin was given, and at one time coramine and caffeine when the circulation became poor, but the patient remained in the coma. At eight o'clock that night he had a clonic spasm of forty min-

utes' duration. Adrenalin was given at that time and the third dose of glucose. As the circulation was now good, he was left alone and only watched. After forty hours he came out of the coma, and again in a perfectly normal state.

On the day following this fifth shock, Sakel's original article in German arrived, and translation revealed how great had been the deviation from his technic in the management of this case. The patient was, however, apparently well, but he was kept in the hospital a week longer and subjected to the polarization or tapering-off phase of Sakel's treatment. He was discharged as well on January 24 and has been in my office several times since. There have been no residuals of a schizophrenic breakdown. He is completely rehabilitated, has gained weight and returned to work.

Case 2. — An attorney, white, aged 30 years was admitted to the Tampa Municipal Hospital January 16, 1937. There was a history of restlessness and nervousness since an attack of influenza, which the patient had eight years before in a military camp at Columbia, S. C. In August, 1933, while in court defending a client for murder, he experienced his first hallucination in the form of a radio voice talking to him. Shortly afterward a client came into his office one day intoxicated and armed with a gun. He felt the man was pursuing him for the purpose of murder and spent many days and nights in a state of anxious excitement fearing for his life. He was taken to the beach, and many other things were done to allay his anxieties, but he finally collapsed.

Placed in a sanitarium, he became so suspicious and afraid of everybody that he could not very well be treated. He remained two months at the state hospital that summer and after six months at home was readmitted there, remaining ten months. After he returned home the second time, the radio voice talked to him continually and he spent most of his time sitting around talking in an undertone in reply. He became restless, impulsive, threatening and pugnacious. Several times in a state of anger he almost committed homicide. He threatened his mother with knives and at one time threw a piano stool at her.

When he became so much worse that he was about to be committed again to the state hospital, a plea was made that he be treated in the Tampa Municipal Hospital. On admission he was restless, constantly moving about, and he could not sleep. He was irritable, touchy, pugnacious and at times noisy.

Treatment was started with an initial dose of 20 units of insulin given the patient on an empty stomach at six o'clock in the morning. The dose was increased 5 units each day until he went into a "wet shock" on the administration of 70 units. His shocks were interrupted with Levine feedings until a nasal obstruction prevented and glucose was then given intravenously. Thirty-five shocks were administered.

Improvement in the condition of the patient was obvious from the beginning. Throughout the period of treatment his appetite was good; his skin cleared up; he gained weight and began to sleep well. His psychomotor restlessness was completely relieved and he was cordial to the nurses, becoming quite social in his demeanor. The radio voice, which continued to come, was neither so loud nor so constant and did not bother him much, he said, for there would be hours when he did not hear it at all. During the intervals between hypoglycemic states he read and enjoyed a history of France.

During the last shock administered, he aspirated much mucus into the lungs and developed a pneumonia in the left lung. He coughed up the aspirated material without difficulty, however, and made a good recovery. On March 14 he was discharged.

This patient has made a "social recovery." While he cannot take charge of his practice, he is able to do some legal work in his office. His antisocial activities have been blocked and he is thoroughly amenable to life at home. Although already a "social recovery" can be recorded in this case of four years' duration, the patient is expected to return to the hospital for further treatment after a period of sixty days has elapsed.

Case 3.—A white man, aged 35 years, was admitted to the Tampa Municipal Hospital, January 18, 1937. Son of a prominent physician in New England, he came of a family of distinguished professional men and had a brother who was a surgeon in New York. Except for an attack of scarlet fever from which he made a good recovery at the age of four years, his medical history was not important. He was a strong, healthy boy, larger than the average but well formed. An average scholar, he was especially good in mathematics. He enjoyed his friends and participated in sports.

At the age of sixteen years he appeared not to be well. On physical examination, made in Boston, urinalysis showed casts, much albumin and a few red blood cells; a diagnosis of subacute nephritis was made. The kidney condition remained about the same until the patient was twenty-two years of age when mental symptoms developed and the urine cleared up entirely. At a state hospital in New England, where he spent two weeks thirteen years ago, the case was diagnosed as dementia praecox of the catatonic type. His father took him to many clinics, but the diagnosis was always the same and little promise was held out for recovery. Following an abdominal operation in July, 1926, his weight increased from 125 to 200 pounds, he improved in general health and showed some improvement in his mental condition. He was subjected to occupational therapy and appeared to be interested in some of the things going on around him. Apparently he listened to the reading of a newspaper. He was, however, negativistic, catatonic and completely mute during all these years.

When admitted to the hospital, he was physically in perfect health, a rather large, stout individual with advanced catatonic symptoms. His position in standing was purely statuesque as he never batted an eyelid. He did, however, have some impulsive and spontaneous movements. In all public places he would shake his head almost constantly, at first slowly and then rapidly, very much as a bull does before charging.

Beginning with an initial dose of 25 units, insulin was given the patient on an empty stomach each morning, the amount being increased 5 units daily until it was obvious that there was very little reaction. The dosage was then increased 10 units each day, and at the end of two months he was receiving 310 units without going into shock. It was at least amazing to see a man walking around the hospital, apparently comfortable, after an injection of 310 units of insulin. Fortunately, 315 units, given the next day, produced a shock.

In the pre-shock stages, this patient has been talking, calling for his father, asking about his mother and at times singing in a rather incoherent way, but each time at the termination of the shock mutism returns and no word can be brought from him. He shows negativism in no other way. The rigidity and statuesque appearance have been somewhat ameliorated, and there is less cataleptic appearance when he is walking around. Before a complete shock was produced, the psychomotor restlessness manifested by the shaking of the head had discontinued, and there has been no return of this feature. The patient is perfectly amenable to home life, and the only obvious psychiatric symptoms are his mutism and rigid appearance. This case cannot, of course, be classified as a recovery, but the patient is still under treatment and has shown marked benefit. Twenty shocks have been given.

Case 4.—A white woman, aged 23 years, was admitted to the Tampa Municipal Hospital January 26, 1937. Her history showed that as an infant for a long period she had colitis and then infantile paralysis, as a result of which one leg was shorter than the other. She did not talk and walk until she was two and one-half years of age. Remaining somewhat childish, she did not develop emotionally into a well regulated adult. Because of unhappiness and failure in mathematics she was unable to enter the senior year of high school. From childhood she had been difficult to manage, was always obstinate about going to school, cared nothing for playmates or clothes but did enjoy swimming, bicycling and other sports.

Two years prior to admission to the hospital she began running away from home, became very elusive and would escape at night when not under guard. At that time she began having hysterical tantrums and sometimes without provocation would remain secluded in a room all day. She was irritable and attached all difficulties to her mother. As she grew more infantile in her demeanor, her case was regarded as a simple case of regression due to the environment of a somewhat pampered undeveloped child. Eventually she became not only more irritable but also negativistic and pugnacious. Several times she attacked her mother and a few times threw missiles which, if well aimed, might have inflicted fatal injury. In view of the fact that there was no place to send this young woman except the state hospital, her parents plead that she be given the hypoglycemic shock therapy.

The first phase of the treatment was entered into very cautiously. The initial dose of 15 units of insulin was gradually increased to 50 units, the amount necessary to produce a shock. In all, four shocks were administered, and during the last one the patient suffered a convulsion. From the very beginning there was improvement in her condition, and she was discharged from the hospital on February 28. Since that time she has been able to remain at home, has been less antagonistic and less infantile in her demeanor, and has become more amenable to directions. She has shown more pride in her appearance than ever before in her life and has become ambitious and energetic about helping with the housekeeping. This case is regarded as a good "social recovery."

Case 5.—A white girl, aged 18 years, was admitted to the Tampa Municipal Hospital February 13, 1937. She was a well developed young woman who had broken down nervously while attending college in Virginia the previous fall. At that time she complained of weakness and exhaustion, but showed no psychiatric symptoms, except a slight emotional disturbance. She was hysterical, would cry easily and at times became very depressed. She recovered from this condition and came to Florida in January. A few days after her arrival she began screaming and yelling, but would express no reason for all the disturbance. She became absolutely uncommunicative and responded to all questions by yelling the louder. She reacted so poorly to drugs that it required large doses to make her sleep. After several days she became quieter but lost interest in everything, even her relationship with the relatives she was visiting. She remained uncommunicative, refusing to talk to anyone, and even refused food, but went around the house whining all day.

After admission to the hospital, her appetite increased during the preparatory phase of the treatment. Fifteen units of insulin were given at first, and the amount was gradually increased to 50 units. When the dose was large enough to cause some reaction, she showed a tendency to go into a convulsion rather than into a coma. Convulsions followed the first three shock doses. Adrenalin finally stopped this tendency, and she had a "wet shock," after which she was perfectly normal for a period of thirty minutes. She has had twelve "wet shocks" and now the mental condition is normal for two hours after each shock. Also, during the intervals between the hypoglycemic states she shows a much better reaction. She responds to questions, assists the nurses in waiting on the other patients, and sometimes gets them water and does other things for them without a request from the nurses. This patient is still under treatment, but the favorable results already obtained suggest a probable complete recovery.

Case 6.—A cigar maker, white, aged 45 years, was admitted to the Tampa Municipal Hospital, March 13, 1937. He was in perfect health physically, but had for a year been having paranoid delusions. The condition advanced to the point where he was having hallucinations almost constantly. He heard voices talking about him wherever he went, and while working in the cigar factory, he would hear his wife tell him she was "stepping out" with young men every night. He believed and acted on this information in spite of the

fact that he was with his wife almost constantly when not at work. While working on the cigar bench, he was continually looking around, fearing that someone was slipping up on him, and when the closing hour came, he refused to leave the factory because he was afraid a group of people outside would attack him.

He was apprehended and brought to the hospital. Twenty units of insulin were administered at first, and the amount was increased to 90 units, but the treatment was interrupted before the shock occurred. At the end of two weeks all the hallucinations had disappeared. As far as his relatives could discern, he had no paranoid trend of thought. He was discharged last week, and for the few days that he has been out of the hospital, his behavior has been perfectly normal. He has shown no paranoid tendency.

SUMMARY

Reports from European clinics of the successful use of hypoglycemic shock therapy in the treatment of dementia praecox merit for the treatment due publicity and extensive trial in this country. There are four phases in the administration of this therapy, and because of the dangers which attend it, the treatment should be given only under the direction of adequately trained physicians with suitable facilities at hand for the proper care of the patients. The series of six cases here presented has demonstrated the feasibility of carrying out this treatment in any well equipped general hospital with a good psychopathic ward, thereby avoiding the necessity of committing these patients to institutions. Results in these six cases have been gratifying. As none other has, this plan of treatment offers hope of reclamation from an otherwise almost hopeless condition to individuals afflicted with dementia praecox and at the same time gives promise of tremendous economic saving to state institutions throughout the country now overcrowded with patients, a large proportion of whom are schizophrenics. It is here suggested that insulin shock improves the carbohydrate metabolism of the central nervous system and that it may be useful in conditions other than schizophrenia.

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A SUMMARY OF THE PRESENT STATUS OF FEVER THERAPY PRODUCED BY PHYSICAL MEANS.

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Miami.

The First International Fever Congress was held in New York City the last week in March, 1937. Within three weeks practically every leading magazine in the country broke with articles written for the laymen.

Coincidental to these events is the fact that we have aided in the pioneering of fever therapy in the South since 1928. The end result is that for the past six weeks our department has become completely flooded with inquiries by telephone, telegraph, personal communications and mail from both the profession and public at large. The problem of supplying this information has become so acute and difficult that we are asking the publication committee to publish this brief manuscript as soon as possible in order that the profession may be better grounded in the fundamentals of this subject and thus be competent to help take care of this sudden demand.

No attempt is being made to discuss in detail or at length any phase because manuscripts already compiled by various investigators are in process of publication and will appear in scientific periodicals during the ensuing months.

DISEASES TREATED AND THOSE NOW UNDER STUDY

Syphilis, gonorrheal infection and bronchial asthma have received the greatest amount of study both as to volume of cases and seasoning in observation time. There is no longer any debate as to the value of pyretotherapy in syphilis. Essentially all of the pioneer investigators in this field have reached the agreement that the combined fever and chemotherapy is far superior to either being used individually. The arsenicals are administered at the peak of the temperature and the other heavy metals are given between the pyretic treatments. When contacted during the primary stage the spirochetes in the chancre are broken into fragments and rendered immotile during the first treatment. Spirochetes inhabiting the first chain of lymph nodes adjacent to the chancre are changed in morphology but some remain feebly motile and will recover and propagate if treatment is stopped at this point. Following the second and third fever sessions they are fragmented and rendered immobile in the lymph chains. Six treatments, however, are considered the minimum course of safe treatment in the primary stage. The temperatures must reach 105.8° F. or above and the maintenance period from seven to nine hours. I consider ten treatments a minimum course for secondary lues and twenty treatments for tertiary or central nervous system involvement. The results of fever therapy in these cases are soundly and definitely established and they are spectacular.

Gonorrheal infection runs a close second, if not first rank, to lues in experimental study. There is no more pleasing sight in medicine to me than to see this infection with its complications melt away under properly governed fever. Six to ten treatments are required by the ordinary fever set-up but by utilizing a combined technique of generalized hyperpyrexia with local pelvic heating in the female the infection is being conquered in one and two treatments. Our experience in this infection has taught us to elevate the temperature to 106.8° F. and maintain at least five hours. Some investigators, however, are reporting good results at lower temperatures.

Bronchial asthma has been subjected to a fair and impartial trial. The verdict is that as a specific hyperpyrexia by physical means is of much value in breaking the acute attack. Beyond this it is of considerable value as an adjunct in combination with other measures of treatment.

Chorea and acute rheumatic fever in children have been treated and were reported at the conference with gratifying success.

Nonspecific arthritis has received much study and the results have been variable. Undoubtedly, it is worthwhile to try hyperpyrexia in these cases but do not give too much assurance of end results.

Multiple sclerosis has received considerable study with hopeful outlook although sufficient observation and seasoning has not elapsed to settle the question of remission and relapse.

Cardiovascular syndromes including essential hypertension, peripheral vascular lesions and angina have been studied and the reports are favorable. Malignant endocarditis failed to respond in the few cases reported.

Ocular disease embracing gonorrheal ophthalmia, luetic interstitial keratitis, corneal ulcer and luetic iridocyclitis were all reported with very favorable results. The neonatorum infection responds in from two to three treatments.

A miscellaneous group including pulmonary tuberculosis, undulant fever, nonspecific neuritis and various otolaryngological conditions have been reported with promising outlook but as yet need further development.

DANGERS, SAFETY AND CAUTION

There can no longer be any logical dispute as to the relative safety of artificial fever produced by physical means over that produced by foreign protein, malaria or other induced infections. Any argument henceforth can be initiated only by those not experienced in both methods. Nevertheless, it must be definitely emphasized that all methods of inducing artificial fever carry with them grave potential dangers and should never be attempted except in a specially equipped department in a hospital and under the guidance of skilled technicians who have been trained in fever therapy. For this sole reason we have for the past three years kept three technicians under training constantly in order to supply the demand for fever technicians as they have arisen in the various parts of our territory.

Prolonged fever therapy is a strain on any patient and, therefore, complete physical and diagnostic studies must be routine before exposing him or her to treatment. The skin, genito-urinary and cardiovascular systems must especially be surveyed in advance. The next safety measure comes in the proper selection of apparatus.

MACHINES AND EQUIPMENT

Personal experience has taught me that I would rather trust a skilled and trained physician with a bath tub than one lacking in fever training with the best apparatus made. We began attempts at inducing fever in 1928 and 1929. From that period until the present we have given over 7,566 treatments and over 22,500 hours of fever. In this experience we have both enjoyed and suffered experiences with the following methods of producing fever by physical means: incandescent light cabinets, hot baths, electric blankets, various hyperpyrexators, vapotherms, infra-red dry hot packs, high frequency current diathermy, radiothermy and electromagnetic induction. The scope of this brief summary does not permit detailed comparative discussion of these modalities and furthermore a manuscript, now in process of publication, covers the subject in full with detailed graphs and tables. Suffice it to say that this experience has led us to our present set-up of choice which consists of three, namely high frequency diathermy, electromagnetic induction with fever bag insulation and electromagnetic induction combined with the air conditioned cabinet. Should we be limited to one piece of apparatus the last named would be our choice.

MAJOR PHYSIOLOGICAL CHANGES

The most constant of these is an increase in the leukocytes ranging from 5,000 to 23,000 cells during the treatment. There are slight changes in the red cell count and the differential by Schilling count shows a shift to the left. Bone marrow punctures reveal a stimulation of the hematogenic function. There are mild and variable changes in nonprotein nitrogen, creatinine, sugar of the blood, acid base equilibrium, changes in blood volume, loss of chlorides and some changes in blood cholesterol.

SUMMARY AND CONCLUSIONS

Fever therapy by physical means is definitely established and is here to stay. Information has been so rapidly and widely disseminated to the public that the demand will compel physicians to familiarize themselves with its fundamentals and to do it rapidly. The fundamental essentials are: choose the proper disease, employ only skilled and trained technicians, conduct a thorough diagnostic survey on every patient to be subjected and choose the proper and most physiological apparatus available.

RADIO BROADCASTS—WRUF

The Committee on Public Relations of the Florida Medical Association has been very active during another year. For the convenience of those who desire to refer to the text of broadcasts, the Public Relations Committee has requested the editor to publish the broadcasts in one number of the Journal. The July number has been designated for this purpose and the chairman of the Public Relations Committee has assembled the broadcasts for publication in this issue. He has also prepared an editorial on this subject which appears in this Journal.

THE BATTLE OF THE CHILDREN*

R. H. Williams, M.D.,
Eustis.

For thousands of years mankind's greatest battle for existence probably was waged by the infants and children. Thousands of years ago children probably were no healthier, no stronger, no more robust than the boys and girls of today. We have every reason to believe that there existed among those early peoples the same causes of disease that produce the illness of children in modern times.

There were the unseen enemies, which we now know as germs, and there were other foes of child life which modern children, fortunately, are not compelled to meet. The early savages and barbarians, when food supplies were limited, did not hesitate to sacrifice the lives of little children to reduce the number of mouths to be fed. Later in history, when the value of each individual was measured by his fighting power, the weak, the diseased, and the deformed, and in some instances, the female children, were exposed to death to leave the tribe free for fighting.

With the Spartans a change from a destructive to a constructive practice was seen.

*Broadcast delivered under auspices of Florida Medical Association, over Station WRUF, Gainesville, Sept. 13, 1936.

Here the particularly healthy and robust babies were selected and passed upon by a committee. They were not only allowed to live, but were most carefully reared so that their natural physical resources were added to by training. The Spartans, physically, were the finest race of their time. At that time little was known about disease prevention although from the beginning of time the human race has sought, consciously or unconsciously, to be healthy.

Disease prevention is of importance not only to the medical profession, but to all who are interested in the material and moral welfare of humanity. Other things being equal, a healthy community is a prosperous one. A pestilence-ridden region prevents all physical and mental development. This was recognized by the ancients who attempted to establish laws of hygiene and health in an effort to conserve human life and activity. However, it is only during comparatively modern times that continued progress has been made in the prevention of infectious and contagious diseases, and in the suppression of epidemics.

The advent of bacteriology, initiated by Pasteur in the last century and its development by a host of scientific workers, made the knowledge and the control of infectious diseases possible because of a better understanding of their cause and distribution. The history of the science of bacteriology presents a story whose romanticism is not exceeded in modern civilization. First of all the germs, those minute living organisms that required magnification by microscope to be detected, were discovered. They were classified into groups. Some were identified as disease producers with a deadliness that characterized them as man's greatest enemies. These tiny organisms showed variations in growth and in preferences for the food upon which they thrive. It was learned that some required oxygen and that others grew without it. It was next learned that these organisms were distributed among human beings. It was learned that they could enter the body through various portals, and that they were introduced by food, notably milk and water; that they lodged on mucous membranes of mouth, nose or throat, and multiplied by various forms of propagation so that colonies represented myriads of these bacteria in action.

Further studies showed that these minute strangers in the body showed preferences for certain tissues or organs which they invaded. Some preferred the lung for their habitat, like the pneumococcus, which produces pneumonia; others the intestine, like the typhoid group which produces typhoid fever. The meningococcus invades the central nervous system and produces a certain epidemic type of meningitis. The diphtheria bacillus invades particularly the mucous membrane of the throat and nose. It is particularly important to learn that this tiny invader and deadly enemy of childhood produces a poisonous product which is termed diphtheria toxin. This toxin has an affinity for certain structures in the body. It combines with nerve cells, or fibre cells, and produces paralysis; it combines with heart muscle causing a striking disease of this muscular organ. It is destructive to kidney cells. This led to a study of this toxin and its effect upon animal tissues. A chain of circumstances led scientists to believe that if bacteria could make toxins, the cells and defensive forces of the body could make antitoxins, because not every individual became ill when these bacteria invaded the blood and a certain proportion of human beings recovered from these bacterial diseases even before bacteria and toxins had been discovered.

The silent workers in the laboratory were continuing their labors and in an incredibly short time, antitoxins and serums were discovered which acted by neutralizing the death-dealing efforts of the virulent organisms. It was now possible to cure diphtheria, tetanus, epidemic meningitis, and recently scarlet fever has been added to the list.

It has already been noted that foods, notably milk and water, carry the agents of disease and huge epidemics may be produced in this manner. The purification of water supplies diminished the incidence of cholera and typhoid fever by destroying or preventing the pollution of the water supplies. The control of milk production may diminish the milk-borne diseases to a minimum. Unclean milk may cause the spread of tuberculosis, typhoid fever, scarlet fever, dysentery, and the diarrheal diseases of infants.

Organisms may also be inhaled into the body; the infection may be air-borne. They are probably carried by dust and inhaled.

Habitations of any kind where consumptive patients are harbored may become a menace to the health of subsequent inhabitants as persons with lung diseases may throw out droplets of spray from the mouth during talking or coughing. These droplets may contain germs which remain suspended in the air, especially in the absence of sunlight. Such air-borne infections do not readily occur in the open air where sunlight is abundant.

A great number of diseases may have their origin as droplet infections and may be considered air-borne. Among these may be mentioned whooping cough, mumps, measles, influenza, cerebrospinal meningitis, pneumonic plague, diphtheria, pneumonia and other diseases. These infections are more likely to occur in closed rooms such as over-crowded schools, factories, railway trains, tenements, and theaters.

New light was shed upon the manner of the spread of communicable diseases when the role of insect carriers was discovered. Insects which suck the blood of man transmit viruses of certain diseases. The flea which has his dwelling place on the skin of the rat may convey a dread disease plague from rat to man. The louse spreads the deadly typhus fever. One type of mosquitoes spreads malaria and another type spreads yellow fever. It is evident that the conquest of insect-borne diseases depends upon the destruction of the insects. This has been practically effected.

A heroic group of American Doctors have made Havana and Cuba habitable by destroying the carriers of yellow fever, and have made the Panama Canal Zone fit for human dwelling by clearing it of malaria as well as yellow fever. In Havana, yellow fever had not failed to make its appearance during 140 years. Under the efficient management of the chief officer, Surgeon Major William Gorgas, U. S. Army, the sanitary regulations in Havana were so modified as to require that every patient having yellow fever should not only be quarantined, but that his room should also be properly protected with wire screens so as to prevent the possibility of mosquitoes becoming infected by sucking the blood of the patient. In addition a systematic destruction of all mosquitoes in other rooms of the patient's house, as well as in adjoining houses, was at once begun. Gorgas sought to destroy all mosquitoes, infected and uninfected, within a given radius of each case. As a result, Havana was free from yellow fever within ninety days, and it has remained free.

Human beings themselves are frequently the carriers of disease. It is probable that many of the acute infectious diseases of childhood are directly conveyed from one child to another. Some persons who have fully recovered from a disease may be carriers. Typhoid fever may be carried in this manner for many years.

It has been said that public health is public wealth. If the extent of human diseases can be limited, if human life can be prolonged, the world will be wealthier in that a great burden of sorrow will be removed. Perhaps a few of us appreciate the great debt of gratitude which is due those workers who have sacrificed everything, in some instances life itself, to promote a science which has for its object the relief of human suffering, the prolongation of life and the prevention of death. Perhaps more important than the cure of the disease is its prevention. This is best illustrated in the case of smallpox. There was a time when nearly every human being contracted smallpox and many of them died. This was all changed by the discovery of vaccination by Jenner, in 1798. Smallpox is a preventable disease and its occurrence is a disgrace and a reflection on the intelligence and the sanitary status of a community.

In connection with the discovery of the toxin of diphtheria it has been learned that the administration of a minute dose of the so-called toxin-antitoxin will prevent diphtheria. It has recently been shown that scarlet fever can be prevented in a similar way. In spite of the discovery of toxin-antitoxin, the death rate from diphtheria in early life remains inexcusably high. Only when an enlightened public opinion demands preventive treatment for diphtheria and the early recognition and prompt treatment of the disease, if it occurs, will this scourge be wiped out.

The common cold, treated with such disdain by the public in general, has been found to be responsible for more loss of time, more suffering, more dangerous complications than any non-fatal ailment known to science. More research workers are engaged in an effort to determine its cause and cure than any other

one disease, with the exception of that scourge of humanity, cancer. There can be no question but that colds are contagious. The frequency with which a cold will travel through a family or a school has been observed too often to question its contagious nature. The suffering, the invalidism, the loss of time and even life, caused by colds and their manifold complications will continue unless greater care is exercised in avoiding the conditions that give rise to colds and favor the various dangerous complications.

During the prevalence of an epidemic of colds one should as far as possible avoid crowds and persons known to be afflicted with colds. One should avoid becoming chilled, tired or exhausted, all of which lowers bodily resistance.

Preventive measures include rational living, cold showers, well ventilated quarters and work rooms, and the avoidance of excesses in eating and drinking, late hours and fast living in general.

THE SCHOOL CHILD*

A. B. McCREARY, M.D.,
Jacksonville.

A sane and sober man does not knowingly drive his car through an open drawbridge, ignoring the danger signals placed there for his protection, nor will he say to himself on the road when confronted by a red lantern: "They are just trying to fool me; I'll put one over on them by driving on as I please."

You say that is absurd—certainly, we will grant you that. But, Mr. Citizen, you are doing things every day that are just as absurd and just as dangerous, and you do them despite, and almost in defiance of, the advice of your physician and your health officials. Organized medicine and public health have always pointed out the danger spots to the public who, sad to say, have gone their merry way, utterly oblivious to danger apparently, until confronted by the grim results of their folly. Why not sit down and think the matter over? Are we in such a hurry that we cannot stop to consider the health and welfare of ourselves and our families?

The child is sent to school to prepare for life. Yet, if the child is not going to live, why waste the state's money on education? The whole scheme of education is predicated on the assumption that the child will live, and should be prepared for useful citizenship. The Board of Education, the Board of Health, and the medical profession feel that this investment should be protected, and with this in view we are calling it to your attention!

What parent would attempt to teach a child to swim and handicap the child by fettering his hands? The wise motorist would not contemplate a long trip without having his car gone over thoroughly by a competent mechanic! The wise parent will not expect the physically handicapped child to do as well in school as his normal playmates. Neither will the wise parent start the child on a nine months' journey without giving due consideration to the physical machine.

What are some of the things that should receive special attention? It is certainly necessary that the child's visual and auditory apparatus be functioning properly if we expect him to learn through the two most important receptive channels. The child with defective vision or defective hearing is greatly handicapped. Your child may have either or both of these handicaps without your realizing it. Why wait until he repeats a grade to find it out? Statistics show that more time is lost from school by children suffering from diseased tonsils (sore throat) than is lost from whooping cough or measles. The child rarely loses more than four weeks due to whooping cough and frequently less than two weeks due to measles. This represents a concise concrete loss combined, during that period while the child with the diseased tonsils may be losing a few days in each month following changes in the weather, simply stringing it out over a longer period of time. Do you realize that a large percentage of heart disease is directly traceable to diseased tonsils? That most of the deformities of rheumatism can be traced to the tonsil? Is all this necessary?

Does it cost any money when a child repeats a grade? Yes, it costs the State of Florida $48.00 a year, the parents a year of board and lodging and the child one year of future earning capacity. Most of the repeaters in school are children suffering from physical handicaps

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and especially from defective tonsils. This is an added expense to the parent and to the government, as well as a loss of precious time to the child. Again, is all of this necessary? ASK YOUR DOCTOR!

Then, there is communicable disease. Many parents have had the erroneous idea that it was necessary for the child to have this, that, and the other, and have frequently pushed their children into the measles and whooping cough with the intention of having it "over with," little realizing that the death rate was higher from measles and whooping cough than from diphtheria! I repeat—the death rate from measles and whooping cough is now higher than from diphtheria.

Measles can be prevented or the severity of the cases greatly modified. Diphtheria can be prevented by a single dose of toxoid, which should be given to every child after the sixth month of age, and the Schick test will definitely and positively assure you regarding the child's safety. Are you interested enough in your child's welfare to inquire about this? If so—SEE YOUR DOCTOR!

There is no excuse for smallpox. Naturally your child should be vaccinated against this disease. The ideal time for the initial vaccination is 10 days after birth, while the infant is too small to scratch and infect the vaccination site. The greatest degree of protection, other than actually having the disease, is acquired by two successful vaccinations. Many persons have the idea that their immunity or protection is in ratio to the size of the scar. Nothing could be further from the truth. The large scar simply indicates that the owner was indiscreet and acquired a secondary infection most likely from his or her own finger nails. One should not be too sure of an old vaccination site. The protection rarely lasts longer than 10 years in a great percentage of the people. Be re-vaccinated. If you are still immune it will not "take" any way and if it does "take," that is positive proof that your immunity had worn out. The old theory that a vaccination was good for seven years is absolutely without foundation! It may be good for seven months, seven years or seventy years. The figure seven has absolutely no authentic basis for existing in this relationship and probably was simply handed down as a superstition.

Talk these matters over with your physician. Make him your counselor and advisor during times of good health as well as times of sickness. Had you consulted him earlier, in many cases, probably a long illness could have been avoided.

How often we see children sent to school with faces flushed and running a high fever with an accompanying sore throat and headache, or other symptoms simply because the parent was so eager for the child to maintain attendance. Think how many other children might have been spared the contact and possible development of scarlet fever, measles or infantile paralysis, as the case may be, had the parent only been thoughtful enough to have called the Doctor! Parents, let me make a plea for your neighbors. *Do not send your child to school when he is not feeling well!* Infantile paralysis frequently starts like a mild common cold. Would you appreciate some parent exposing your child to that disease simply because they thought it was only a cold? No, you would say, "Why didn't they call a Doctor?", and justly so.

If health conditions are ever greatly improved in Florida, or anywhere for that matter, it must come through the efforts of an intelligent, cooperative public. The practicing physicians are doing their part; these broadcasts indicate that. Public health officials are doing all they can. Now, what are you doing? It is important to build up a "health conscious" attitude on the part of the public to take the place of the neglectful, careless one, which is altogether too prevalent! If you saw a sneak thief steal some trifling article from a neighbor's house would you spread the alarm? Certainly, you would. Yet, if you saw a violation of a health regulation, what would you do? The sneak thief stole a petty trifle that in all probability can be easily replaced, while the other criminal (shall I say that word? Why not? A criminal is one who breaks laws, is he not?) may be robbing you of health, even life, or perhaps robbing you of the life of persons near and dear to you!

Just a few things for you to think over.

To recapitulate: Your child is starting to school. We urge you to give the child a fair chance:

1. Have your Doctor examine your child and make sure that he or she enters school without a handicap.

2. Be sure that the child has been protected against smallpox, diphtheria and typhoid fever.
3. If the examination reveals defects, have all correctable defects attended to by competent medical, surgical and dental care.
4. Remember the Golden Rule: "Do unto your neighbor as you would have him do unto you." When your child is feeling bad call your Doctor before allowing the child to go to school and possibly expose many other children to some serious contagion.
5. Remember that a strong healthy physique is one of the best defenses against disease and especially against diseases like infantile paralysis and spinal meningitis. Call your Doctor and let him treat the colds and other disorders which may lower bodily resistance and make your child more susceptible to invasion by the virus of poliomyelitis and other dangerous diseases. Keep the physical stamina up to par and thus throw off many dangerous infections.

HYPERSENSITIVE PEOPLE*

S. C. Colley, M.D.,
Tavares.

When the patient with hay fever or asthma consults his doctor, why does the physician make a series of scratches on his arm and drop a different solution upon each scratch? And why does one of the scratches become red, swell and begin to itch? What has all that to do with sneezing, wheezing, and watery eyes? It is a long story—one which begins in the laboratory, the workshop of the scientist, and has ended in the office of the country doctor.

Some scientists study problems which are directly related to human life, to human ills and to human events. Others study science, as they say, for its own sake and call themselves pure scientists. A few years ago Dr. Ralph H. Major, while passing through a chemical laboratory, was somewhat startled to have a well-known chemist, a "pure" scientist, rush up to him and exclaim: "I have just made an important discovery, and, thank heavens, it has no practical application." Such a "pure" scientist must be very careful, for he can never tell when his discovery may have a very practical application. The history of medicine is filled with just such occurrences. The theory of today may be the fact of tomorrow, and the discovery in "pure" science may later have a direct bearing upon the lives of thousands of people. The subject of allergy or hypersensitiveness, illustrates in a striking fashion just such a turn of events.

In 1839 a French physiologist, Francois Magendie, injected a dog with a small quantity of egg albumen. No bad effects followed the injection. Later, however, he again injected the dog with the same dose of egg albumen, and it died quite suddenly. Magendie was much mystified. Egg albumen, so far as anyone knew was not a poison, yet it had produced fatal effects.

Some twenty-five years later a small boy of nine went to an old-time spelling bee in the country. In the evening he ate a hearty meal at a farm-house, and at the end of the meal buckwheat cakes were served. All of the company began eating the cakes with great relish, and the small boy took a bite of his cake. He had scarcely swallowed it before he felt an intense burning in his throat and stomach—"felt as if I had swallowed hot lead," he said. He immediately began to retch and became so short of breath that he was forced to run out of the house into the open air. His eyes became bloodshot, his face swollen and red, and his lips knotty with large hives.

He was very much frightened and decided to walk home. The night was very cold, but the cold air relieved his itching and burning skin, and after walking three miles through the snow to his home he felt much better. His mother thought that the attack was caused by playing too hard, but the boy felt sure the buckwheat cakes had caused the trouble. The following morning he was perfectly well.

Some time later the boy ate some corn cakes and had another attack. This seemed to show that corn cakes also could produce these symptoms but when the matter was investigated further, he found that the corn meal came from a mill where the corn had been ground on the same stones used for grinding buckwheat flour. He was then convinced that

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he was sensitive to buckwheat flour and resolved to avoid this item of diet carefully in the future. He was, however, not always successful in avoiding his enemy. If he ate corn cakes which had been cooked upon the same griddle as buckwheat cakes, he invariably had hives, pains in his throat and often vomiting. So he had to exclude all cakes from his menu unless he personally supervised their cooking.

For several years he thought he had the same sensitiveness for black pepper, for when he ate highly seasoned foods, as soups and turkey dressing, he had these attacks. To settle the point he brought home some pepper berries, had them ground at home and used them in his food. No unpleasant symptoms followed. Suspecting an adulteration in the black pepper of commerce, he sought out an agent of a large spice mill and asked him if such were the case. After considerable hesitation the agent admitted that his firm bought buckwheat hulls by the carload and after roasting and grinding them mixed them with spices and pepper. On one occasion he had a violent attack after eating some honey which he noticed was rather dark. When he investigated this honey he found it was made by bees who had fed upon buckwheat blossoms, and that this kind of honey was known commercially as "buckwheat" honey.

This gentleman, after forty-five years of adventure with buckwheat presented himself at the Johns Hopkins Hospital for observation. During those forty-five years much had been learned about just such cases. His arm was scratched slightly and one drop of an infusion of buckwheat was placed on the scarified area. After fifteen minutes the patient remarked: "The buckwheat is beginning to work." He complained of a tight feeling across his chest, began to cough like an asthmatic, and developed intense itching hives over his face, body and extremities.

This same phenomenon attracted next the attention of two physicians in Vienna—Clemens von Pirquet and Bela Schick. This is the same von Pirquet who later became one of the most famous child specialists in the world and whose recent tragic death caused such genuine grief in his native Austria. It is also the same Schick who was later to give his name to the Schick test, known, not only to the physician, but to every school teacher and mother in the country. At that time, however, they were both comparatively unknown young men working in the Children's Clinic in Vienna. They were treating children suffering from scarlet fever with a new serum which had been introduced for the treatment of this disease.

In treating these children with the serum, it was necessary to use very large amounts. They noted that about two weeks after the children had received the serum, some of them had sudden fever, chills, profuse eruption of hives, and severe joint pains. They found also that children who did not show this reaction after a single dose of serum, almost invariably had this reaction if they were later (in about two weeks) given a second dose of the serum. They called this condition "serum disease" and called it allergy, or the changed state, or "altered reaction."

Tuberculosis, as was well known, was not invariably fatal—there was good evidence that tubercular patients developed immune substances that fought the disease. Many years before, Robert Koch, the discoverer of the tubercle bacillus, had shown that, in growing, this bacillus formed a substance known as tuberculin. He even hoped at one time that the use of tuberculin would cure the disease. In this he was disappointed as we well know. Von Pirquet, however, showed that when a tubercular patient's skin is slightly scratched and a drop of tuberculin is applied to the abrasion, a local swelling and redness appears, much like that seen in his cases of serum sickness. This test is known as the von Pirquet test.

This simple test which made von Pirquet's name known in the medical world from Paris to Shanghai and from Tokio to New York, led to an application of this method in a great variety of disorders suspected of belonging to the same general class. The patient whose adventures with buckwheat cakes have been described showed, it may be recalled, a marked skin reaction when a single drop of buckwheat infusion was applied to the skin.

Many persons have long known that they had a sensitiveness to certain foods; strawberries are a classical example. Many persons have intense attacks of hives whenever they eat strawberries. Some people have the same reaction when they eat eggs. Fortunately,

these persons often discover their own sensitiveness and by avoiding the cause escape unpleasant after-effects. At times, however, the offending article of diet is not so readily discovered, and here the employment of these skin tests modeled after the Pirquet test have often demonstrated the offending substance responsible for the illness.

One of the best known of the various kinds of asthma is that long called by its victims as "horse asthma." Many sufferers with this complaint have known long that they had attacks of asthma whenever they came in contact with horses. I saw a very severe case of asthma develop in a man who spent the night in a small hotel. He remarked that for years he had known he was sensitive to horses, but had seen no horses at the hotel. The mystery was cleared up when it was found that a few years previous the basement of the hotel had been used as a livery stable. With the coming of the automobile the livery stable had been abandoned and the basement remodelled for storage rooms and a heating plant. Evidently all trace of the horse's presence had not been removed, for the guest on the third floor had an attack of asthma the first night he slept there. A skin test on this gentleman showed a marked reaction to horse-serum.

The patients sensitive to horse-serum, the sufferers from horse-asthma, often present a serious problem to the physician. Most of the antitoxins and serum used in contagious diseases contain horse-serum. If a patient who is subject to horse-asthma develops diphtheria and is given a dose of diphtheria antitoxin, he may have a very stormy time, and his physician may have some exceedingly anxious moments. The passing of the horse as a means of travel has removed a great menace to the sufferers from horse-asthma, but the development of antitoxins have produced a fresh hazard.

In addition to sensitiveness to horses, some people are sensitive to cattle, to sheep, hogs, dogs, cats, rabbits, mice, chickens, ducks and geese. Many individuals are known to be sensitive to chicken feathers and have attacks of asthma whenever they sleep on a feather pillow. Many patients long subject to asthmatic attacks have seen a complete disappearance of their symptoms when they abandoned the use of sleeping pillows.

One of the most important and widespread diseases due to allergy is hay hever. This disease seems to have been first described in 1819 by a London physician, John Bostock, who suffered from it in summer and gave it the name of "summer catarrh." For the greater part of a century it seemed to be a comparatively rare disease.

William Dunbar, who was the first to inaugurate the modern scientific study of this disease, considered it, at first, a product of modern culture. Working people and uncivilized nations, he stated, were seldom attacked by it, whereas nations possessing a high culture were most commonly affected. North America, he found, showed the greater number of cases.

In 1856, forty years before Dunbar began his experiments, Charles Blackley, a physician in Manchester, England, proved that pollen was the cause of hay fever. Blackley himself was a sufferer from the disease and found that if he collected pollens and applied them to his eyes or to his nose he could produce an attack. He also found that if he made a scratch on his skin and applied pollen, he had intense hives at this point. Later Helmholtz, also a sufferer from hay fever, examined his nasal secretions during an attack, and found bacteria present which at other times, when he was free from attacks, were not present. Helmholtz's, experiments were followed by others and for many years the bacterial theory of hay fever was generally accepted.

Dunbar began to suspect that there was something present in the blooming fields which caused asthma and began to collect the pollen and test it on persons susceptible to hay fever. Dunbar showed that these pollens produced attacks of hay fever. This was the final blow to the bacterial theory.

Since Dunbar's time hay fever has been intensively studied, particularly in this country, where it continues to show its prevalence. It is conservatively estimated that there are more than one million hay fever victims in this country and probably ten million persons who are predisposed and may develop the disease if they are exposed to too much pollen. The ailment is distinctly on the increase. Fifty years ago it was a rare disease: today it is exceedingly common.

The most prevalent type of hay fever seen

in this country is caused by golden-rod and ragweed which scatter their pollen in summer. Ragweed pollen can be easily carried fifteen miles in the wind and a single ragweed plant may shed millions of grains of pollen in twenty-four hours. The ease with which this pollen is borne by the wind calls attention to a very interesting adaptation in nature.

Another substance to which many individuals are sensitive is orris-root. This is very commonly employed in cosmetics, the use of which is widespread and is often a conspicuous feature of modern life. Wherever women are, there is an abundance of orris-root. Churches, theaters, schools, homes, business offices, even barber shops, have it in the air. The patient whose hay fever attacks are due to sleeping on feather pillows can easily change his feathers to something else, but what can the poor man do who is sensitive to orris-root? He cannot be told that he must avoid all women. Women who are sensitive to orris-root, as can be seen, are in even a more pitiable plight.

A very striking disease due to hypersensitiveness should be mentioned. This disease is called "giant urticaria" or "giant hives;" also a formidable term, "angioneurotic edema" is often employed. Patients subject to this affection often, without demonstrable cause, suddenly develop a marked swelling of the eyelids, of the lips, or of the hand. Sometimes the poor patient's face is so swollen that this friends scarcely recognize him. Unfortunately, the swelling is not limited to producing distressing symptoms of the face, but may involve the throat and larynx and produce sudden death from suffocation. Many patients of this disease are sensitive to certain foods and their avoidance brings complete relief. Their sensitiveness to such foods is shown when the application of them to a scratch on the skin provokes a local reaction.

What after all is the explanation of these various disorders described as allergic diseases? No theory yet proposed explains all the manifestations. Perhaps the best theory is that advanced by Vaughan.

In the normal animal, individual cells become specialists. When food is introduced into the intestinal tract, the intestinal cells secrete ferments which attack and split it up. When, therefore, horse-serum is introduced into the skin, the cells although not used to this process, form ferments which gradually destroy it. If ferment is formed in large amounts and if the animal receives a second injection of horse-serum, the serum is immediately attacked and broken up and poisonous substances are formed. These poisons produce the symptoms of allergic disease.

The actual substance responsible for the allergic phenomenon is unknown but there is considerable evidence that it may be histamine, a substance which an English physician, H. H. Dale, has shown is present in large amounts in most of the tissues of the body. Histamine in extremely small doses, when injected, produces hives, a fall in blood-pressure and shock-symptoms like those in allergy. It is a somewhat disquieting thought to recall that a man constantly carries in his tissues enough of this substance to kill a room full of people were it released. The release of a certain amount of this substance may be the cause of the symptoms.

Unsatisfactory as the theories are, treatment, as already indicated, is usually satisfactory. As in so many other diseases the physician must treat his patient when it is necessary and not wait for the explanation of the disease. Meanwhile the patient who is sensitive to foods, and heat or light must be protected from them.

THE ROMANCE OF MEDICINE*

Louis Orr, M.D.,
Orlando.

Medicine is the only world-wide profession following everywhere the same methods, actuated by the same ambitions, and pursuing the same ends.

For many years the Florida Medical Association has sought to offer, through the press and principally the radio, information on medical subjects that would be beneficial and informative to the public mind. The principal motive in this educational movement has been to more thoroughly acquaint the public with the symptoms, the diagnoses, and the various types of treatment of the more common diseases and afflictions of mankind. It has been an

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effort on the part of the Association to sound warnings of disease and symptoms, which perhaps if attended to early might result in prevention of untold suffering later in life. Sympathetic understanding of the public has been solicited for without this, the great battles now being waged against tuberculosis, heart disease and cancer can never be won. To be familiar with a disease would quite naturally seem to arouse curiosity as to its origin and history.

To read of the advancement of medicine from the dark ages to the modern era is to read of the greatest romance the world has ever known. From the beginning it has been fraught with ignorance and quackery; its progress encumbered with conflicting religious teachings; its martyrs persecuted for their beliefs which, however, have survived and made modern medicine the benefactor of all mankind. This progress can be divided into two distinct periods, the ancient and the modern, but even ages before the ancients came into being, primitive man carried out certain practices which might be called medicine in that evil spirits were driven from the body in an effort to relieve suffering. For all purposes, however, the only eras that need be considered are those founded upon historical fact; first, that of ancient medicine, and later of modern medicine.

Historians have discovered that as far back as 2250 B. C., medicine was recognized and practiced in Babylonia. In the ancient civilization of Egypt 5000 years B. C., even though a mixture of religion and superstition, a certain number of practical medical measures were carried out, for here we find the first use of a splint for a broken bone. To the Hebrews of antiquity must go full credit for being the first of all people to practice preventive medicine, personal hygiene, and sanitation. Their priests were the sanitary police and even in these modern times the priests are still practitioners of enforced personal sanitation. A pity it is that their wise practices have not become world-wide for much suffering from loathsome disease might be eliminated.

The first records of a scientific medical system are Greek in origin. Greek medicine was exhibited in its pure form from 500 B. C. till the rise of the Roman Empire. The principal localities of the development of medicine were in Asia Minor, and Sicily, with Athens as perhaps the chief center. Hippocrates, the great Greek physician, was the first to sit beside his patient to observe and record symptoms of disease. To him goes full credit for the art of diagnosis. After his time, civilization and medicine both declined. For the next 1800 years, no physician equalled Hippocrates. As a result of his work and efforts, he is today considered the father of modern medicine.

In the period of the Renaissance from 1453 to 1600, the important medical figure was Vesalius, the anatomist. Vesalius was born in a period when the invention of printing and world exploration brought about a knowledge of other countries and people which greatly aided the progress of medicine. As Vesalius worked at the dissection of the human body, Leonardo da Vinci founded the school of human art. The more he painted the more anatomy he needed to know. In this way anatomy and art developed hand in hand. Strangely enough, progress in this period was also fostered because of the ability of the students to better translate the works of Hippocrates of many years before. Shortly after this time, Italy became the land of many of the great scientists. Their names are not infrequently used to designate certain parts of the body. In the 16th and 17th centuries not only anatomy but pathology, the basic science of disease, and physiology, the basic science of health, began their development.

In the first of the 17th century, the great English speaking scientist, William Harvey, discovered the circulation of the blood. Harvey came to the absolute conclusion that the blood passed out through the arteries and back through the veins. It was at this time that the first microscope was invented and through it, the Italian physician, Malpighi, discovered the capillaries which carry the blood from the arteries to the veins and thus made Harvey's work complete.

The 16th century cannot be passed, however, without mentioning Paracelsus and Pare, one a physician and the other a surgeon. Paracelsus first analyzed drugs and mineral waters. He believed that nature cured diseases much more than did physicians and felt that too much meddling was dangerous. Pare was first an apprentice to a barber and later became an army surgeon and at the time of his death was the greatest surgeon of the day. He learned that wounds healed more rapidly when let alone than when treated too frequently. It was the custom at that time to treat gunshot wounds by pouring boiling oil in behind the bullet and when Pare's supply of oil gave out one day he found that next day his patients without the oil treatment were much better off. From this time on his fame became widespread. Pare is credited with the well-known expression, "I treated him, but God cured him."

In the 17th century, came the beginning of North American medicine. Cortez erected the first hospital in Mexico City in 1524, a beautiful building still standing. In this country, the first hospital was built in 1663 on Manhattan Island.

The 18th century, although not full of epoch-making discoveries, saw one of the greatest achievements of all times, the discovery of vaccination. It is this period of medicine that was dominated by theories and systems, by cults and creeds, but even so, some permanent progress was made. In 1752, Reaumer showed the effect of stomach juices on foods, and digestion thus became understandable. William Hewson, in 1710, first discovered the correct use of digitalis in treating diseases of the heart. The outstanding surgeon of this time was John Hunter, whose studies resulted in the present day operation for correction of club feet. In this century, sanitation and drainage were stressed, sewers were constructed, lepers were isolated, and gymnastic exercises were introduced.

The 19th century was destined to see great strides in scientific medicine for in this period preventive medicine and the control of infectious diseases developed. Blood letting by the open wound and by leeches became popular. In 1833, 40 million leeches were sent to France. It is said that our first President, George Washington, died from weakness produced by too much blood letting. From 1840 to 1850, we find diseases described as they were by Hippocrates many years before. Basedow described exophthalmic goiter. Stokes wrote on heart disease; Addison recognized pernicious anemia. During this decade, we find America making her first major medical contributions, the greatest of which was the discovery by Long and Morton of ether as an anesthetic for surgical operations. Before this time, the patient was held to the table by strong men and the surgeon performed as quickly as possible.

In 1860, the first principles of antisepsis were formulated by the English Quaker surgeon, Lister. He discovered that wounds exposed to the air became infected and that by adding carbolic acid to the wound, the infection was prevented. He first thought bacteria came from the air, but later discovered they came from the hands of the surgeons. From this discovery came aseptic surgery and surgeons thereafter were to wear gloves, gowns and a mask.

In the latter part of the 19th century, the work of Louis Pasteur, the man who has saved more lives than any other man, became known to the world, and pasteurization, a process of heating a fluid to a certain degree to prevent bacterial growth, became a universal procedure. Today the milk you drink is made safe by this process. In 1882, the German, Robert Koch, discovered the cause of tuberculosis. This discovery stimulated the later discovery of the germs of cholera, typhoid, diphtheria, tetanus, and meningitis. Modern methods of sanitation, purification of milk, and sewage disposal followed closely behind these discoveries. Almost at once, infant mortality began to decline.

With the dawn of the 20th century, we find the beginning of phenomenal discoveries and inventions which hastened the progress of scientific medicine. Many of you who are listening can remember the discovery of the x-ray by William Conrad Roentgen in 1905. Everyone knows of the

splendid work of Madam Curie and her husband in the discovery of radium and how the world believed that at last a cure for cancer had been found. The germ causing the greatest scourge to mankind, syphilis, was isolated in 1905 by the young German, Shaudin. In 1910 a fellow-countryman, Erlich, completed his 606th experiment and at last found a specific cure for that dreaded disease. To Banting and Best, of Canada, we are indebted for the discovery of insulin, which prolongs and makes comfortable the lives of those afflicted with diabetes. Yellow fever, malaria, and many other diseases were found to be caused by the germ being transmitted by means of the mosquito. Drugs and measures of control were at that time discovered which both cure and prevent these very commonly fatal diseases. Serums and vaccines have been developed which will, if used in time, invariably cure diphtheria, lockjaw, tetanus, and other serious diseases. Tuberculosis, in most cases, now means only an enforced rest in a suitable climate. Complete recovery is the usual result. It is no longer called "The Captain of the Men of Death." Those suffering from pernicious anemia owe their lives to the splendid work of Minot, Murphy and Whipple, who found that the disease responded almost miraculously to the administration of liver extract. These scientists have just recently been awarded the Nobel prize in medicine for this outstanding work.

Modern surgery has advanced rapidly in the past few years. Those who have certain types of heart disease can hope for relief by having the thyroid gland entirely removed. The small glands near the thyroid, called parathyroids, which control calcium salts of the body, can now be transplanted successfully from one patient to another. Successful operations on various parts of the brain are an everyday occurrence. Hopeless cripples have been made useful citizens by the marvels of orthopedic surgery. Proper exercises are overcoming the dread effects of infantile paralysis. Now, even if one's lungs are completely paralyzed, one may live indefinitely in an artificial respirator.

Progress in the treatment and the control of cancer, although little known to the public, is making great headway. Millions of dollars are used each year for scientific research on this dreaded disease. At any time a treatment may be discovered that will completely eradicate this cause of such a high yearly death rate.

Modern medicine has thus emerged from an age of mystery and misunderstanding to an age of mathematical exactness and scientific control. In the hands of its practitioners are the instruments of precision which, when deftly applied, yield splendid results and relieve untold human suffering. What new discoveries in the field of medicine and surgery are to come, we do not know, but if the progress in the science of medicine is such in the future as it has been in the past, the joys of living will be untold in their anticipation and old age will indeed be a pleasant and just compensation for a life of usefulness and good health.

THE CHRISTIAN FATHERS AND MEDICINE*

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In every age the study and practice of medicine has been attended by an element of romance and heroism. Christ was the outstanding healer of all time, and was called "The Great Physician." The rapid recognition of His virtue and power was largely due to His ability and willingness to heal. Sacred history records that He healed all that came to Him for healing of whatever diseases they had. The ablest of the Gospel writers is St. Luke, who was called the "beloved physician."

Whenever any nation took on civilization it invariably gave some attention to the relief of suffering. In the earlier centuries medicine was merely an art, not being elevated to the dignity of a science until later years. There has always been some relationship between religion and medicine: the former being the healing of the soul and

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the latter the healing of the body. The two go well together.

As the peoples of the earth progressed in civilization they gave more attention to the study of medicine and of late years the healing art has been elevated to one of the most dignified professions and has been placed upon the firm foundation of science.

Among the early men who gave attention to medicine was Titus Clemens who was a student of Plato and the Alexandrian School of Philosophy, about the second century of the Christian era. He studied the ethics of Christianity and published a large number of books, chiefly on philosophic and medical topics. Hieronymus was an early medical writer who wove into his teachings religion and philosophy. His writings were somewhat similar to those of Clemens. The writings of Hieronymus might be summarized in the following words: "Whoever is ill recovers health only through a restricted expenditure of energy, a rigid mode of living and a meager diet." He and other Christian fathers preached much against drinking and overeating, the common vices of their times; and it is most singular that it required the lapse of nearly 2,000 years before a single nation saw the wisdom of their teachings, and had the courage to incorporate them into legislative statutes.

Those doctors whose names stand out in the dim pages of history, the men who were leaders of their day in Babylon, Egypt, Greece and Rome, as well as the Christian Fathers of the early Church saw clearly the importance of the above doctrine and followed it. They realized the importance of sacrifice and service. Those were the lodestones which guided them to the study and practice of medicine, and their convictions of life compelled them to serve humanity. Unfortunately their services were not always appreciated, and their teachings were often scorned and forgotten. How much richer, stronger, and better our civilization would be today if the teachings of those philosophers of antiquity had been heeded! The historian says: "It is difficult to picture how fine the physical and mental qualities of the European peoples would have been if prohibition and diet restrictions had been enforced since the time of Hippocrates and Galen showed the injuries done to mankind by intemperance in eating and drinking. Throughout the ages, the greatest medical authorities have shown that those excesses are the greatest hindrance to the health of people and the progress of civilization and today these things have to be preached as frequently as ever."

THE DOCTOR'S ALTRUISTIC SERVICE

The physician cannot be a hermit. A hermit is never a complete man. We are essentially social units compelled by inherent instincts to enter into close social relationships. We must be a strong, pulsating, active part of the community in which our life is cast, receiving and giving service. No member of any community does so, more than the doctor. In Asia, Africa, and Australia, as well as in America, we find doctors excelling all others in rendering service. As we glance through the musty pages of the records of the remote past, we find the doctor doing this same sterling work. Social conditions might be in a precarious state and culture slight, still the family doctor retained a heart of gold, and completed his ministering to the sick regardless of physical or political obstacles. In all history we have never found the doctor failing in service. There is to him something deeper in life than mere leisure and luxury. Besides the universal craving for religion which never forsakes mankind, there is in most people a strong desire for social service. Not all are capable of rendering it. The doctor and the churchman are peculiarly fitted for doing it, and when their dispositions lead them to utilize these privileges, they become the greatest benefactors of their day. There is a yearning for sympathy firmly planted in humanity, and it is that which acts as a lodestar bidding the doctor stand firmly upon the basic fundamentals of life, and grace his community with acts of service, whether such service is recognized or quickly forgotten. These are the forces which caused men like Hippocrates and Galen to live laborious days; they were the impulses which caused the doctor to assist in shaping the development of civilization and ethics. Upon these

were based the promotion of charitable enterprises, like hospitals, foundling homes, asylums, and sanitaria. All of these are offsprings of self sacrifice and altruism, and the doctor has always been among their ardent champions.

The Christian Fathers usually delivered their teachings in plain, direct, and forceful style, as is evidenced in the following by Clemens: "Truly, some men live that they may eat, as the irrational creatures whose life is their stomach and nothing else." But a wise teacher advises us to eat that we may live. For neither is food our business, nor is pleasure our aim. Wherefore, there is discrimination to be employed in reference to food. It is to be simple, truly plain, as ministering to life that it may conduce to health and strength. High qualities of thought and character never accrue from over feeding, ease and luxury.

Antiphanes, the Delian physician, asserted that rich viands are the cause of much sickness. He said: "The gluttons seem absolutely to sweep the world with a dragnet to gratify their luxurious tastes. They surround themselves with hissing frying pans, and wear their lives away gratifying an avaricious palate. The eating man seems to be all jaw and stomach." Thus spoke Antiphanes centuries ago and his words are as true now as then. Clemens in philosophizing on drinks and diets compares the havoc of wines to that of shipwreck except that the former is more insidious than the latter, but both will swamp soul and body and constitute major disasters. Nemesios gained renown for suggesting the dominance of mind over body. He also anticipated Harvey's discovery of the circulation of the blood.

Early medical men suffered much persecution for their teachings. They held the torch of intelligence high among a people who were little inclined to move forward in their thinking. They were persecuted for teaching advanced ideas in medicine and health. In the days of Galen the laws forbade the dissection of human bodies; therefore, this great student of anatomy was compelled to confine his dissecting activities to apes. In many lands even the dissection of lower animals was forbidden by law, under the superstitious theory of transmigration of the soul. They feared Dr. Galen or some other physician might injure the soul of one of their departed friends in the process of dissecting an ape or a cat. Similar ideas are still held in certain lands where the light of Christ's Gospel has not penetrated the mental and moral gloom.

MINISTERS PRACTICE MEDICINE

In the early centuries of the Christian era most of the doctors who were not Christians gave themselves over to luxury, ease and self-indulgence to the neglect of the public. This forced ministers of the gospel to study medicine, and many of them applied the healing art. One of them said: "Christ is the greatest figure in history, because of His reality; and He still has the power, because of His reality, to make men fall in love with Him in spite of all their prejudices. A Christian is one who has fallen in love with Christ; and the peculiarity of the Christian religion and of Christian character springs out of this fact."

The masses in those times had little or no vision. The men of inspiration were in the Church, and through their foresight history has been rewarded by the preservation of the principal medical works of antiquity as well as the handing down of the practice of medicine. Many were crude materialists and worshipped only self and pleasure. Such a people could produce only mediocre men, and history finds few artists, literary men, inventors, or surgeons outside of the Church.

The medical classics of the Greeks and Alexandrians, as well as the writings of the Christian Fathers, and the literary men of Greece and Rome are replete with facts bearing out this statement. It was high inspirations that led men to preserve medical records for all time.

CONSTRUCTIVE MEDICAL WORK

Throughout the long period of the Stone Age medical lore was perpetuated by oral traditions. In Babylon and Egypt, when hieroglyphic writings were introduced, medical learning was committed to writing.

The hieroglyphic records of the scribes, the clinical notes of the doctors, and the early textbooks on medicine, served to broaden the minds of medical students. Later libraries were established and finally schools for the instruction of doctors were founded. These schools developed outstanding, vigorous thinkers like Asklepeades, Hippocrates and Galen and subsequently the Church Fathers. Throughout the centuries since the founding of Babylon constructive thinkers have carried the torch of medical thinking higher and higher.

While the early Christian Fathers made no great strides in advancing medical science they did preserve and hand down to posterity the discoveries and teachings of Hippocrates, Galen and other ancient medical thinkers. They were busy disseminating the fundamental tenets of Christ's life and teaching, viz: love, mercy and truth. Compassion and consideration for the physically and mentally weak and maimed was their idea. Before Christ's teaching gripped the world there were no hospitals and almshouses. In no country were these institutions of love and mercy established until the people were first enlightened by the Gospel of the Son of God. The sick, the maimed, the blind were cast out to die or take their chances with the elements. Their care was auctioned off, and they were farmed out to the cruel mercies of the lowest bidder. The dissemination of the Gospel of Christ changed all this. Under His teaching the helping hand of mercy is extended to those in need. The Christian Fathers played a large role in bringing about this change.

In almost every century one or more men rise to carry learning onward and forward and advance the general welfare of humanity. While ordinary life teems thoughtlessly on in town and country, there is always some man living laboriously to lift up the masses and the professions to higher planes. The history of medicine illustrates this most markedly. They rise and do great work in seeking and publishing the truth for subsequent centuries to digest. Such men as Hippocrates, Celsus, and Galen bequeathed to the world a rich legacy of sound philosophy and medical teaching which will serve succeeding generations as long as civilization shall endure. They did their work well and the responsibility is ours to cherish and preserve the rich inheritance they handed down to us. We must emulate their high ideals and carry on in their stead.

THE EARLY TEACHINGS IN ANATOMY AND THE CIRCULATION OF THE BLOOD*

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Our knowledge of anatomy began with the early Greeks, the 15th century B. C. In Hippocrates' time, what anatomical knowledge there was, was gained by animal dissection. It is probable that Hippocrates possessed only a superficial knowledge of the position and structure of the internal organs and even less idea of the physiology or function of these organs. Aristotle left no branch of learning unexplored and he extended human knowledge in many directions, more particularly in his investigations of the lower animals. Through his connection with the great conqueror, Alexander, he was able to collect the bodies of beasts, hitherto not put to scientific investigation and dissection. It is equally certain that he never examined the bodies of dead human beings. He founded the science of comparative anatomy and left a mark on human thought that has endured to this day.

Herophilus, as a result of his researches, was a prolific contributor to anatomical knowledge. As a result of his studies of the nervous system he gave the first description of the large blood-vessels or venous sinuses contained in the covering of the brain and their meeting place, at the base of the skull cavity, which bears his name—the torcular Herophili. He was the first to point out that there were two types of nerves; one carrying sensory impulses toward the brain, the other carrying motor impulses from the brain to the muscles. He also described some of the parts of the brain itself, especially one of its cavities,—the fourth ventricle. Dissecting the human eye, he described the retinal coat of the eye-

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ball, the lense. He gave names to a small bone in the neck, the hyoid bone; the first portion of the small intestine, the duodenum; and the gland surrounding the outlet of the male bladder, the prostate. In addition to his anatomical work, Herophilus was a celebrated and respected clinician. He gave great attention to the pulse, emphasizing the differences which occurred in rate, regularity, force and amplitude.

The scientific medicine of the fifth to the second centuries B. C. was built on a true clinical experience with disease, and the Alexandrian School, on a practical investigation of human anatomy and on the vivisection of animals.

In the second group were the alleged followers of Herophilus, who wandered into sophistries rather than follow the study of anatomy and the teaching of the School of Cos and of their patron. Galen, starting with the anatomical knowledge contributed by the Alexandrian School, enlarged upon this knowledge and made still greater contributions. For his own anatomical research, he resorted to dissection and vivisection of animals, particularly of apes, monkeys, pigs and dogs. Dissection of the human body was regarded by the Romans, as it had been by the Greeks, as sacrilegious. For this reason, Galen founded his anatomical knowledge entirely on the anatomy of animals. Galen's most valuable anatomical work was done in investigation of the nervous system. He described the meninges or coverings of the brain, gave permanent names to several parts of the brain, and showed that nerves may be purely conductors of sensory impulses to the brain, or purely conductors of motor impulses to the muscles from the brain, or that they might be a mixture of both. Nerves may originate in the brain or in the spinal cord, and of the twelve pairs, called cranial nerves, originating in the brain itself, Galen described and named seven. He also gave good descriptions of some of the heart valves. But he held that the veins originated in the liver, that the expansion not the contraction of the heart was its important function and that there were minute pores between the chambers of the right and left heart through which blood passed. While he asserted that the arteries and veins communicated by means of minute branches and thus showed his knowledge of one of the essentials of the law of the circulation he seems not to have even suspected the the blood circulated. When Harvey described the circulation of the blood fourteen hundred years later, one of the greatest obstacles in obtaining credence for his demonstration was the fact that it was contrary to Galen's teachings.

Anatomy and physiology at Salernum were taught according to the work of Galen. Some of the members of the school published elementary works on anatomy founded on the dissection of pigs. Treatment rested largely upon the Hippocratic method based on experience and common sense measures. In diagnosis, emphasis was placed upon inference drawn from the character of the pulse and of the urine. These inferences in the light of the knowledge of the present day were largely erroneous. Anatomy was taught from the dissection of the human body only in Italy, at Bologna by Mundinus as edited by Ketham and printed in 1494. It shows the professor reading from his own writings or from some earlier author, ex cathedra, while a prosector demonstrates the anatomical findings on a body laid out on a table below the reading desk of the master teacher.

The immediate followers of Mundinus edited his book and incorporated their own ideas, but only a few new discoveries, which was far simpler, than to present an entirely new description of the human body, in accordance with their own observations. It would seem that these early anatomists considered any deviation from the teachings of Galen which might be found, an exception and not the rule, or else they were so imbued with the teachings of Galen that they described what he had described rather than what they really saw. Such an observer was John Ketham, a German, who lived at Venice, and who printed an edition of Mundinus in 1492. The illustrations are inaccurate and roughly drawn, but show that the artist had seen the structures which he portrayed. Ketham's book, Fasciculus Medicinae, was published in several editions between 1492 and 1513.

Dissection of the human body in Italy was not confined to a few medical schools and physicians. The early sixteenth century saw the highest development of painting and en-

graving, both on wood and copper. The painters, Leonardo da Vinci, Marc Antonio, Michelangelo, Raphael, and Titian in Italy and Albrecht Durer in Germany, flourished during this period. Leonardo da Vinci left behind him many anatomical drawings which present an accurate picture of dissections of muscles and of the internal organs in many respects superior to the later publications of Vesalius and other medical anatomists.

Outside of Italy the teaching of anatomy was carried on in all schools on the basis of the writings of Galen. Jacobus Sylvius was professor at Paris and became celebrated for his brilliant lectures on anatomy, which however, did not go beyond the teaching of inherited medicine. Many celebrated investigators began their anatomical studies in the lecture room. Versalius, Servetus and Charles Etienne were among the number. The securing of bodies for dissection was a very difficult problem for the aspiring investigators of anatomy in the sixteenth century.

The Anatomy of Versalius presents a new departure in the making of medical books. It is well printed and the illustrations are of a distinctly artistic character. The skeleton and dissections of the muscles are presented in detail, but also as a portrayal of the whole body. These drawings represent a man always standing in the foreground with a background representing a landscape including trees and buildings and distant hills. If one looks at the landscape, it is found that a series of twelve illustrations can be pieced together to make a continuous panorama, one plate following after another, as if engraved upon one wood-block and subsequently separated. The division of the plates is such that trees and buildings are cut in two, the only object of the artist being to center the anatomical presentation of the human body in its various stages of dissection. It would seem as if the author and artist were planning to be able to claim that the drawings were artistic and not anatomical, for anatomists had previously got into trouble with the authorities by their zeal in adding to their anatomical knowledge by dissection. Charges of heresy were not infrequent against the profession at this time. Versalius in spite of his great addition to anatomical knowledge, failed absolutely to understand or grasp any idea of the circulation of the blood.

The influence of Versalius on anatomical illustrations continued for many years. In 1685 Gottfried Bidloo, of Amsterdam, published his Anatomi Corporis Humani, illustrated by plates of the lines of those of Versalius. These were re-engraved on copper by the artist, Gerard Lairesse, and are done more artistically than with references to accuracy of anatomical detail. The Bidloo plates were used by Wm. Cowper of London in his Anatomy of Human Bodies, published at Oxford in 1698, which fact caused a bitter controversy. The original opposition to the book of Versalius brought up the question of the dissection of the human body, and in 1556 the Emperor Charles V referred the matter to the theological faculty at Salamanca and asked for a ruling as to the orthodoxy of the practice. It was decided by those representatives of the Church that anatomical dissection by physicians for the benefit and teaching of medicine was permissible. It was many years however, before anatomical investigation became at all general. In fact there is still a widespread opposition to the examination of the bodies of the dead to determine the exact cause of death, and the advance of medicine is hampered today by that prejudice.

Before Harvey, the men whose ideas had the greatest influence on the prevailing conception of the physiology of the blood were Erasistratus and Galen. Erasistratus considered that the air was drawn into the left ventricle from the lungs and pumped from it through the arteries to the tissues; that in health the arteries contained only air, and that the veins contained only blood; that there were communications between the fine branches of the arteries and of the veins, and that in abnormal conditions of disease, blood escaped from the veins into the arteries. Galen disproved the theory of Erasistratus, that the arteries contained air. He considered that the veins originated in the liver; that the arteries originated in the heart; that the liver supplied the blood with nutriment and that the left ventricle of the heart supplied it with a hypothetical vital spirit just as essential as nutriment. He traced the blood by way of the veins from the liver through the heart to the lungs. But since he admitted that the lungs must have vital spirit, as well as nutriment and since he was in ignorance of the pulmonary circulation, he made his theory tenable by

stating that there were minute pores by which blood containing vital spirit entered the right from the left heart. As he said the pores were invisible, it was difficult to prove or disprove his theory.

Another of Galen's fallacies was his contention that the heart influenced the motion of the blood not by its contraction or pumping force but by its dilation or suction. It seemed to be his idea, that there was an ebb and flow of blood between the liver and heart on the one hand, and the tissues on the other. The nearest approach to an idea of the circulation of the blood in Galen is found in the description of the route by which a drug given to influence a condition of the lungs would reach that organ upon being sufflated. Galen says for a drug to arrive at the lung, it is necessary to take the following course: from the mouth into the pharnyx and esophagus to the stomach and small intestines, being absorbed by the veins of the mesentery, it is transferred to the veins on the under surface of the liver, then into the vena cava, the right side of the heart, and finally to the lung. There is no word in Galen of any return circulation from the lung to the heart. Describing the nourishment of the general tissues of the body, Galen states that the nourishment must in the same way be supplied by the veins from the liver, and again there is no suspicion of any return flow. To equalize the circulation, Galen invented the non-existent pores in the septum of the heart. Galen knew nothing of the physiological uses of the inspired and expired air, and gave as the only explanation of respiration that it was necessary to cool the blood, which would become overheated from the heat generated in the heart itself.

Wm. Harvey was born at Folkestone, Kent, in 1578. He was a small man, "easy and graceful of movement" with piercing black eyes and a quick temper, was physician and friend to many men of rank and distinction. In 1628 he published a book on the circulation called De Motu Cordis et Sanguinis. The book was published in Latin at Frankfort, not so much, because it would cause less stir if published abroad as that a book-fair in that city in that year offered special facilities for publication.

Today the average layman knows the blood circulates in the body and has a rough understanding of how this is accomplished. He knows, for instance, that the heart acts as a pump, that arteries carry the blood from the heart; that the veins carry blood to it; that the heart is divided into right and left chambers, which are in turn again subdivided into upper chambers or auricles and the lower chambers or ventricles. He can trace the course of the blood from the left ventricle into the large artery, or aorta, and knows that it is distributed to all parts of the body by branches of this vessel; that these branches become smaller and smaller until they divide into microscopic network of fine vessels which connect (anastomose) with similar small branches of the venous system. He knows that the blood is collected from the small into the larger and larger veins until it reaches the large vein of the abdomen (inferior vena cava) or the large vein in the upper chest (superior vena cava) and that these two veins empty the blood into the upper chamber of the right heart from which it enters the lower part to be pumped into the lungs. Here it goes through the same division into the small vessels, is recollected and carried back to the upper part of the left heart where it enters the lower part or left ventricle and thus completes its circulation and starts again on the same journey. He understands also that while in the lungs the blood takes oxygen from the inspired air and gives off carbon dioxide.

Harvey began to enunciate the doctrine of the circulation of the blood in 1616. He did not publish his views until twelve years later when his book was published at Frankfort in Latin. This delay in the publishing of his doctrine was due to his recognition of the "attachment of man to custom and authority," and his realization of the hostility and criticism, which would result from the effort to advance novel opinions at variance with the accepted views. In his introduction, he points out the shortcomings of some of the prevailing views on the action and uses of the blood, and speaks of the hesitancy and reluctance he feels in venturing to arouse the inevitable hostility and criticism which must follow the introduction of new ideas. He then proceeds to outline the steps which have led him to his conclusions, supporting them with demonstrations and experiments. The work is written in extraordinarily clear and concise language.

The argumentation is impressively logical. Except in a few places, where he uses the physiological terms of the day, the description seems thoroughly modern.

MEDICAL ETHICS*

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From the beginning of medicine, the importance of medical ethics has been recognized. In 450 B. C. Hippocrates wrote an oath which contained many fundamental morals that have been brought down to the present and on which the principles of ethics of the American Medical Association are based today. It is thought that Hippocrates got much inspiration and thought from Egyptian physicians who lived some two centuries before his day. Hence, the beginning of medical ethics is not known definitely.

I think we will agree that the most important thing in an individual or in an institution is character, and that character is based on the fundamental conception of what is right and what is wrong. During the latter part of the senior year each medical student receives a little pamphlet entitled "Principles of Medical Ethics."

The "Principles of Ethics" of the American Medical Association is the biblical instruction which endeavors and attempts to make a Christian out of a man in the practice of medicine. Yet the ethics of the profession are often misunderstood by the laity. They seem to think that ethics are some sort of a secret code or a trust by which we attempt to perpetuate our profession and make it lucrative. As a matter of fact, we may be a trust, but the only one I ever knew that looked after other people. There is, underlying all principles of ethics, a reason—a reason which will meet the approval of any honest thinking man if he understands it. The trouble has been often that when our principles are attacked from the outside, we individually do not know enough about what the principles of ethics mean ourselves, to answer the arguments.

"The Principles of Ethics" as it is called, is a short presentation in three chapters. 1. The duties of physicians to their patients. 2. Duties of physicians to fellow practitioners. 3. Duties of the profession to the public.

It is, as you see, an effort on the part of the profession and intelligent elements of medicine to conserve the idealism of the medical past. It seeks to elevate the standard of practice and scientific attainments of gentlemanly and moral conduct, for the benefit of the patient first of all, for the mutual instruction and elevation of the profession and in the interest of the public as a whole.

From the oath of Hippocrates, we quote the following: "I will follow the system of regime which, according to my ability and judgment, I consider to the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will not give to a woman a pessary to produce abortion. With purity and with holiness, I will pass my life and practice my art. Into whatever houses I enter, I will go into them for the benefit of the sick." Could anything be finer? And remember this was 450 B. C.

There is, perhaps, no profession upon which as much depends on faith. The merchant who has on his shelves various articles for sale, can exhibit what he has, and the prospective purchaser can look at what he is buying. But the prospective purchaser who looks into the eye of a doctor has no means of knowing the quality of material behind that face. If you see a man and classify him as a doctor, you do not know as you look at him, how absolutely competent he may be. However, you called him as your doctor, and you have to accept him absolutely on faith. There is no way in which the medical man can absolutely prove to anybody his capacity for what he undertakes. It is essential, therefore, that the basis of relationship of medical men with the outside world in their services is the element of faith.

The medical profession, if it expects to deserve and hold the confidence of the people, must measure up to that fundamental by proper preparation, and integrity in character. The code of ethics exhibits these principles. One of the chief duties of a physician is to seek to improve whatever talent he may have, by every legitimate means at his command, in order that he may be better prepared to discharge the obligation he owes to himself, to

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his profession and to his fellowman, as we shall find as we proceed with the discussion of this subject.

It is always laudable for a physician to get the best there is in the science of medicine, and this can be done by honest and industrious application to study. The cultivation of friendship in the profession broadens and makes a man better qualified through discussion of his cases. Every doctor owes it to himself and his clientele to join his medical society and attend regular meetings in order to keep himself abreast of the scientific advances in medicine.

Patience and delicacy should characterize all the acts of a physician. The confidence concerning individual or domestic life entrusted by a patient to a physician and the defects of disposition or flaws of character observed in patients during medical attendance, should be held as a trust and should never be revealed except when required by the laws of the State.

A physician should give timely notice of dangerous manifestations of the disease to the friends of the patient. He should neither exaggerate nor minimize the gravity of the patient's condition. He should assure himself that the patient or his friends have such knowledge of the patient's condition as will serve the best interest of the patient and the family. A doctor should never advise an operation unless he would want the same operation performed on himself under the same circumstances.

It is unprofessional to receive remuneration from patients for surgical instruments or medicine. It is unprofessional for a physician to assist unqualified persons to evade legal restrictions, governing the practice of medicine; it is equally unethical to prescribe or dispense secret medicines or other secret agents, or manufacture or promote their use in any way. A doctor owes it to himself, family and patients to put his practice on a sound basis so that he can keep abreast of the times with books, instruments and postgraduate work.

It is also necessary to educate the public to a proper consideration of the doctor's working hours and observance of periods of relaxation and diversion which will materially increase his efficiency and longevity.

Every medical man has been asked why the medical profession does not believe in advertising. To this I will reply, there are several good reasons. In the first place, advertising from the standpoint of a doctor is, to say the least, poor taste. If I advertise as a merchant that I have on sale today a fine piece of silk or certain furniture, or if I advertise I have a splendid bird dog pup I want to sell, I am advertising something material and outside myself, and you can come, look at it, and judge for yourself. When a doctor advertises he essentially advertises the superiority of his brain. We, at least, do not particularly enjoy hearing a man say, "I am the smartest lawyer in Florida" or "I am the finest doctor." "I know more than doctor Smith." It is poor taste for a man to advertise his mental capacity. Second: if it is correct for one to advertise, it is equally correct for all to advertise. It is a privilege that any can use. If advertising were universally accepted, it would reduce a dignified profession to a joke. There are about one hundred and fifty physicians in Tampa. Suppose you picked up the Tampa Morning Tribune and read the advertisements of one hundred and fifty physicians, would it not be a joke? Yet if it is good for one to advertise it is for another. Next, if I advertise, I advertise something which is either the truth or it is not. If I say I am smarter than Dr. Smith and I can do better surgery, or I have secret methods, or that I have discovered a cure for tuberculosis but I am not giving my formula to the public, one of two things is true. Either I am claiming to do something which I cannot do or I am a plain liar, because, as a matter of fact, there are few doctors that possess any essential virtues or knowledge apart from common knowledge of the profession.

Most doctors as advertisers, succeed because of their scientific lying. Suppose, on the other hand, we say a man advertises: he does not lie: he tells the truth. Suppose it happens that some genius has made a discovery by which he can cure a certain disease. We say, therefore, why should not that man take advantage of that thing to his own profit? It is his mental effort.

The principles of ethics of the American Medical Association intend that a man shall be a Christian first and not a commercial agent. The principles of ethics require that, if I happen to discover something which is

capable of saving a single human life, or alleviating the suffering of a single person, it is my obligation, as a humanitarian, to give that discovery the widest publicity so it may reach people all over the world. The result is when I advertise, I either am a liar or lack that thing that makes a Christian out of a gentleman.

Thus it is with all principles of ethics. There is underlying a reason and a rational one.

AMERICA'S MENACE*

F. D. Bartleson, M.D.,
Fort Myers.

FOREWORD

The majority of the facts and figures herein contained was obtained from the original article written by Dr. Thomas Parran, Surgeon General, United States Board of Public Health, in the July issue of Graphic Survey. The facts were stated in such a clear, concise and easily understandable manner for the laity that I have taken this opportunity to pass them on in the original language.

F. D. Bartleson, M. D.

Throughout the ages, mankind has been assailed by war, famines, plagues, pestilences, hurricanes, diseases of every nature, and varied other allied menaces, which have been a detriment to the welfare of our great civilization. In our midst today is a menace more horrifying than war, more devastating than fire, and more ravishing than famine. This menace is greatest of plagues and pestilences. America's menace of today and tomorrow is syphilis.

We of America, according to the history of medicine, are accredited with an equal share in the source of syphilis. Two schools of opinion as to its true origin and antiquity have developed, one believing that it occurred in Europe prior to the discovery of America, the other holding that it was unknown in Europe until after 1492, and that it was introduced into Europe from America by some of Columbus' returning sailors. It is certain that syphilis has spread rapidly throughout the world since this time. Hundreds of different names have been applied to it, of which syphilis, lues venera and the great pox are the principal ones which have come down to us.

Syphilis is a contagious disease, characterized by widespread involvement of the tissues of the body and not infrequently leading to permanent anatomic damage and even death. According to the late Dr. Osler, syphilis is protean in its manifestations. It is a plague that disables half a million Americans a year; a plague that is wrecking lives, shattering homes and filling institutions all over the land with its insane, blind, feebleminded or unemployable victims—that is syphilis. It bids fair to become the greatest American disease.

As a matter of comparison, let's pause for a moment and compare the incidence of syphilis with that of other diseases. Let me repeat, in 1934 syphilis disabled more than five hundred thousand Americans. There is more of it than measles, twice as much as scarlet fever, three times as much as tuberculosis, ten times as much as diphtheria. It is a plague that does a hundred times as much damage as the dreaded infantile paralysis.

We have been much concerned in the past about the number of automobile accidents in this country. According to the report of the National Safety Council, during the year 1934 there were only 107,000 cases of permanent disability, while for the same period the disability caused by syphilis was five times greater. It is responsible for more than 10 per cent of all insanity, 18 per cent of all diseases of the heart and blood vessels, for many of the stillbirths and the deaths of babies in the first few weeks of life. There is reason to believe that if all conditions due to syphilis were reported as such, it would be found the leading cause of death in the United States.

There are no explosive outbreaks of syphilis. It occurs in magnitude of sporadic epidemics, throught single infections by personal contact from victim to victim. The patient usually knows from whom the disease was contracted. Usually sex contact is involved, although an abundance of cases are on record in which the disease has been incurred from kissing, from the

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use of a recently soiled drinking cup, napkin or handkerchief; from a pipe or cigarette; in receiving services from a diseased person, such as a nursemaid, barber, or beauty shop operator; and from giving services, such as those of a dentist, doctor, or nurse, to a diseased person. The ease and rapidity of spread of this disease, for example, by kissing, is shown by the following incident. In an eastern state recently the health officers traced seventeen cases of syphilis infection to a party at which kissing games were played and in which two infected, but socially desirable, young men, participated.

Apparently a gradual but fundamental change is taking place in the view which health authorities, the medical profession, and the general public have of the various problems surrounding syphilis. We are passing through a period of evolution not dissimilar to that which occurred in the campaign against tuberculosis. There was a time when tuberculosis was regarded as a disgrace and the unfortunate victim of this disease was ashamed of his affliction. "Consumption" somehow cast a stigma upon its victim. The social background of the disease was little understood and the public thought that people suffering from consumption were somehow blameworthy. Our reactions toward syphilis have been even more pronounced because not only is the acquirement of this disease a great human tragedy but the method of contracting it is frequently associated with conduct which is surrounded with inhibitions, prejudices, and often with social stigma. The fact that syphilis is often associated with prostitution or other forms of promiscuity, led to a feeling on the part of the public that the acquirement of this disease constituted just wages for sin. Many of the laws and much of the public health policy in the past have over-emphasized the association of syphilis with prostitution.

It is only in recent years, since it became clear that so often syphilis is acquired in socially sanctional family contacts or through accident, that the emphasis on prostitution as a factor has somewhat diminished. The fact that all cases of congenital syphilis and at least half of the cases of extragenital infections are or should be devoid of social stigma, makes it clear we have erred in the past in believing that the solution of the problems of syphilis lay exclusively in the control of prostitution. Furthermore, a large proportion of those who acquire syphilis as a result of promiscuity do so in the ignorance and exuberance of youth. In such cases it is the conduct and not the disease itself which is the proper object of social condemnation.

It is now believed by leaders in the field of public health and of medicine that we are on sound scientific ground in viewing syphilis as a highly prevalent, communicable disease affecting the righteous as well as the wicked, the rich as well as the poor, the wise as well as the stupid, and all races and conditions of men, women, and children. We will make progress more rapidly by dealing with syphilis in accordance with the well established principles of control of communicable disease and in making as few exceptions as possible in favor of or against syphilis. If, when confronted with a problem in the control of syphilis we consider what we would do in a similar case involving tuberculosis, we will usually be on a sound policy basis. For both are familial diseases, both are chronic with long periods of infectivity, both have a complex social background which must be taken into consideration. Syphilis, however, unlike tuberculosis is quickly controllable, curable in its early stages and can in all but its final periods be treated as an ambulatory disease. In fact, we can treat five cases of syphilis for what it costs to treat one case of tuberculosis. The advantages are therefore very greatly on the side of syphilis as compared with tuberculosis, and no less impressive a body than the New York State Health Commission stated that its conquest is within our power.

Let us, then, consider the problem coldly and scientifically. All circumstances point to our ability to control syphilis far better than we have tuberculosis, to stamp it out more effectively than we have typhoid. There is no intermediary host such as we find in mosquito-borne malaria or louse-borne typhus, and there is no reservoir of infection aside from man himself. And we know how to render such cases noninfectious.

The first sign of syphilis is a sore or lesion

at point of contact with the infection. It appears from twelve to forty days after exposure. It may not be painful and may run a slow course, sometimes three to eight weeks. This is called the sero-negative stage, for the blood is not yet positive in its reaction to the famed Wassermann test for active syphilis. The diagnosis can be made readily, however, in any good laboratory by the darkfield test, which shows the causative organism under the microscope. If adequate treatment is begun in this primary stage, the disease can be cured in 86 per cent of all cases. If treatment is delayed only a few days or weeks until the blood Wassermann becomes positive, the cures drop from 86 to 64 per cent.

The second stage is often characterized by skin eruptions, which may look like measles, a food rash, or a light case of chickenpox. The rash may or may not be accompanied by falling hair, fever, sores in the mouth, headache, indigestion. However, in one man out of every five, and one woman out of every three, all early symptoms are so evanescent as to be recognized. Yet the blood Wassermann is positive and if the test was used routinely by all physicians in all physical examinations it would uncover many unsuspected cases.

In practically every case, sooner or later the disease becomes latent and burrows within like a termite. There are no symptoms other than the positive Wassermann, and the best of treatment produces a satisfactory result in less than half the cases.

Then, there is the third stage. Perhaps there is nothing suspected until a syphilitic baby is born; perhaps when life insurance is refused because of organic heart disease. Perhaps the stumbling gait of locomotor ataxia, the irritability and delusions of general paresis, or failure of vision preceding total blindness, first brings knowledge of the mad-dog infection which has, at least, a strangle hold and which may turn its victim into a white faced invalid with damaged heart and blood vessels, a derelict whose face is eaten by great sores, or a homicidal maniac behind barred windows.

What can be done for such cases is largely by way of alleviation; though 25 to 30 per cent complete remissions can be effected even among paretics. But from the public health point of view it is not necessary to effect a cure in each individual suffering from syphilis. Our hope of control lies in breaking the chain of infection at its weakest link—the early case.

Fortunately, diagnosis of the disease is easily made as soon as it becomes infectious; and by treatment we can end infectiousness promptly, thus preventing spread of the disease from one sufferer to others. It is our very definite responsibility, therefore, to reach each case promptly and to treat all syphilitic pregnant women, for we can absolutely prevent transmission of the disease from mother to child.

Yet in spite of these facts which, theoretically, make even the eradication of syphilis possible, the syphilis rate in this country is not declining. Sweden, Norway and Denmark, with a population approximately equal to New York State, have less than 1600 cases of syphilis each year. In April of last year there were 21,984 cases under treatment in upstate New York alone, excluding New York City. In that area, 1,836 new cases were diagnosed in one month. In Sweden, with almost exactly the same population only 431 cases occurred during the entire year previous.

Citizens of Florida, the land of sunshine, of flowers and of good health, let us see how this scourge is affecting us at home! As previously stated, syphilis has no respect for classes, conditions, communities or races. Syphilis is not foreign to us nor are we exempt. It is in our midst; let me state the menace is very much in our midst. From a report of blood tests for syphilis just received from the Florida State Board of Health for the first nine months of 1936, the following astounding figures were disclosed. Out of a total number of 105,036 blood tests made 11,686 were positive for syphilis, 5,182 partially positive and 5,215 unsatisfactory for examination. Just think of it, People of Florida, approximately 17,000 cases of syphilis from 105,036 tests made for nine months of this year in our dear state while in the combined countries of Sweden, Norway and Denmark there are less than 1600 cases of syphilis each year and in Sweden there occurred only 431 cases during the entire previous year.

The things for us to do are closely outlined by Dr. Thomas Parran, Surgeon General,

United States Public Health Service, namely:

1. Find syphilis. The obscure cases will never be found in time except by the Wassermann dragnet.
2. Treat syphilis promptly. A few days delay may mean failure of treatment.
3. Examine for syphilis the family and all other contacts of the syphilis patient.
4. Prevent the birth of syphilitic babies by requiring blood tests before marriage and early in each pregnancy.
5. Teach syphilis and talk syphilis. The facts about it must be known to all the people.

The methods may be worked out to fit our need. Syphilis control is today's joy. Our children will hold us criminally careless and incompetent if, with the means at hand, we fail to end this scourge within our generation. This is one contribution we know how to make toward a safer, happier world for them to live in. Syphilis must be the next great plague to go. With the combined efforts of physicians, public health officials, educators, and the public, syphilis can be conquered. We must attack it now.

HEART PAIN*

E. W. Bitzer, M. D.,
Tampa.

Most individuals who reach middle life have at times felt pains in the chest in the region of the heart. Often these pains are of short duration and are frequently attributed to gas in the stomach. The spectre of sudden death is so intimately associated with heart disease, however, that any pain in this region may lead to a state of nervous apprehension. Before discussing heart pain I am going to tell you something about the pains in the heart region that do not originate in the heart itself.

A few years ago I had occasion to investigate this subject and in going over 4,052 case reports I found that 561 patients had chest pains in the heart region who did not have heart disease. This will give you some idea of how common such pains are. As to the cause of this pain it was found that the largest number of these patients had rheumatism, chiefly involving the spine and intercostal nerves. It was found also that in a considerable number the pain originated in the gastro-intestinal tract, either in the stomach or in the intestines; for instance, too much acid in the stomach was a common cause, as well as constipation and allied troubles in the colon. Pleurisy was also found to be a frequent cause of the pain about the heart. The type of pleurisy which is likely to be confused with heart disease is that which is localized and near the heart, producing pain which may easily be taken for heart pain. In 48 cases no physical cause for the pain was found and it was assumed that it originated in a functional disturbance of the nervous system. In other words it is possible to have pain in the heart region that is purely nervous in origin.

There are certain conditions which occur in the heart itself that are not dependent upon pathological changes or organic heart disease, yet which may at times be responsible for pain in this region. For instance, many people have premature beats: that is, two beats which occur close together, followed by a long pause and then an unusually hard beat. This is caused by a disturbance of the nerve mechanism that controls the heart beat and although it causes a peculiar sensation in the chest and at times a feeling of pain, it is in itself a harmless condition.

A somewhat similar disturbance, due to an imbalance in the nerve control, is commonly called a "nervous heart." In such individuals the heart beats too fast and even on slight exertion the heart rate will be 130 or 140, where the normal is 80. Nearly all of these individuals complain of pain in the left chest in the region of the heart. Usually they do not have any organic heart disease. The exact origin of this trouble is unknown but it frequently occurs in individuals who have glandular disturbances and sometimes follows acute infections of various types.

The location of the pain in this group, which may be designated as the extra cardiac group, is usually in the left breast or

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just under the left breast. Sometimes the pain is sharp and darting; at other times it is more of an aching. In some of these cases the pain runs down the left arm, just as it does in angina pectoris. Generally, with but few exceptions, the pain is not brought on by exercise or by excitement as it is in angina pectoris. Indeed, at times it may be relieved by exercise.

A very unfortunate condition sometimes occurs in these individuals: they become heart conscious. They feel every heart beat. This, of course, keeps them in a state of anxiety, has a tendency to increase the sensitivity of the nervous system and to aggravate their symptoms.

The most common pain that actually occurs as a result of organic heart disease is called angina pectoris. This is a disease of middle or old age. The cause of this condition is usually arteriosclerosis, or hardening of the arteries. All people past middle life have hardening of the arteries, but in the majority it is either not well marked or does not involve the arteries that supply the heart muscle with blood, the coronary arteries. When the coronary arteries are involved in this process they are narrowed and obstructed to a point where the heart muscle receives an insufficient amount of blood, which reduces the capacity of the heart for work. As an illustration, when the arteries that supply the legs are obstructed to a considerable degree, you might possibly walk one block without trouble, but if you walked two blocks you would begin to get a pain in your legs. If you stop and stand still for a few minutes the pain will disappear. That pain would be produced by an insufficient blood supply to the muscles in the legs. The same thing happens in the heart. Individuals of this type can walk one block without any discomfort but if they walk two blocks they begin to feel pain in the chest. This pain usually occurs in the middle of the chest, behind the breast bone and the type of pain is gripping, often described as though one were being squeezed in a vise. Frequently this pain is accompanied by pain in the left arm, a state of apprehension and a feeling of impending dissolution. Curiously enough, not all individuals who have hardening of the arteries in the heart have this pain, which is known as angina pectoris. some of them merely have a reduced capacity for work; they get tired easily and are short of breath; also there are certain cases in which exercise does not cause the attacks. These individuals usually have their attacks at night, which is probably explained by the fact that the blood pressure goes down during the night, consequently reducing the circulation in the heart muscle through arteries that are partially obstructed.

Angina pectoris patients do not necessarily die immediately. A considerable number live ten years or more, provided they live carefully. Occasionally the pain disappears for a considerable period of time and such patients are inclined to feel that they are cured; nevertheless the capacity of the heart for work is materially reduced.

A condition that is closely related to this is called coronary thrombosis. In coronary thrombosis there is a sudden complete occlusion or stoppage of a branch of the artery that supplies the heart muscle with blood. Such a condition can occur only in blood vessels that are already diseased and consequently is common in angina pectoris cases. This is followed by the death of a section of the heart muscle. The muscle tissue so affected is absorbed and gradually replaced by scar tissue. With this there is usually very severe pain which requires large doses of morphine to relieve it. Extensive lesions of this type are sometimes followed by rupture of the heart, resulting in sudden death. Even in these cases of sudden occlusion, pain is not always present and shortness of breath may be the only symptom. The ability to recognize this condition and a knowledge of the necessary treatment has undoubtedly reduced sudden and unexpected deaths to a very marked degree.

We have just discussed the relationship of angina pectoris and coronary thrombosis to the ordinary type of hardening of the arteries, in which the blood pressure is usually found to be normal. High blood pressure, which causes a hardening of the smaller arteries, may be a factor in the

production of angina pectoris. This is proved by the fact that most women who develop angina pectoris have high blood pressure. It is rather common, however, for people with high blood pressure to have pain in the region of the left breast, which is not angina pectoris but is a pain similar to that which occurs when the heart beats too rapidly. We frequently call it fatigue pain.

It has been proved by animal experimentation that an elevated blood pressure will cause an enlargement of the heart in about two weeks. It is possible for high blood pressure patients to develop heart disease without pain; in fact it is possible for them to die as a result of heart disease without any apparent disease of the blood vessels in the heart. Such individuals usually develop shortness of breath and swelling of the legs as a sign of heart failure.

Pain in the chest is sometimes found in syphilitic cases where the disease has attacked the aorta and heart itself. In some of these the wall of the big vessel, the aorta, gives way and a sac is formed on the side. This is called an aneurysm. The majority of such individuals have pain in the chest, which is more continuous, therefore differs from that of angina pectoris. Syphilis may cause an inflammation, however, which stops up the openings of the coronary arteries where they branch off from the aorta. This may produce typical angina pectoris. Curiously enough a certain number of such cases with complete occlusion of both arteries that supply the heart muscle do not have pain.

There probably are many other factors concerned in the precipitation of angina pectoris. Various acute infections play some part not only as a cause of arteriosclerosis but may be the starting point of the attacks of pain. For instance, it is known that rheumatic fever, which is often called acute inflammatory rheumatism, and typhoid fever attack the arteries and may be factors in the production of arteriosclerosis. It is common in the history of cardiac cases for the onset of symptoms to occur after a cold. For this reason we always consider colds a hazard and feel that they may play a part in the production of heart disease.

In conclusion, I wish to emphasize the difficulty in determining whether a pain in the chest originates from a diseased heart or from some other cause. It is extremely important to determine as accurately as possible the origin of the pain. If an individual knows he has a diseased heart he is in a position to prolong his life by careful living. Most of the individuals who die suddenly and unexpectedly are those who attributed their symptoms to indigestion or some cause other than heart disease and consequently more or less ignored their existence. In contrast to this are the many individuals with serious heart disease who live in comfort for a good many years, largely through an intelligent understanding of their condition.

HOLIDAY HAZARDS*

W. Wardlaw Jones, M. D.
Dade City.

The season of the year that should be the most joyous only too often becomes one of heartaches and of sorrows. In a great number of instances these troubles might have been avoided.

Let us consider some of the apparent causes and attempt to arrive at a means of avoiding these hazards, so that this joyous Yuletide season may be one of happiness and pleasure in all family circles.

The one hazard that your newspaper will be quick to make headlines of, because 'tis excitement, is that great tragedy, the automobile accident. In reading the accounts of accidents in our newspapers one may generally see that the accident could have been avoided if some one had used a little precaution or had been considerate of the other fellow.

A few of the outstanding causes of accidents will be mentioned. Undue hurry. Speed seems to be one of the main objects of the car manufacturers today; and it, no doubt, enters to a great degree in the production of our highway accidents. In a vast majority of wrecks, we may, upon in-

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vestigation, find that either one or both cars involved was speeding at the time of the accident. It is a physical impossibility for a car to be handled as easily at sixty to seventy miles an hour as it is at forty to forty-five miles an hour. I am not an advocate of extremely slow driving but I am an advocate of safe driving. Do not exceed that speed which is consistent with safety on a given piece of road, whether that highway is filled with cars, totally empty, rough, smooth, curved or otherwise.

Neglect of giving proper signals as to your intentions of turning may cause an accident. Generally speaking, this type of accident will cause disability instead of a mortality for the vehicles involved are usually traveling at a relatively low rate of speed.

Just plain inattention to what you are doing and where you are going is a cause of some accidents. Closely allied with this cause is that of driving with the radio going and thus, gradually, the thoughts become absorbed in the program to the sad neglect of one's driving duties. Excessive fatigue also is in this same class. As the holiday season approaches there will be a number of people on our highways who will be going rapidly towards their homes, only to discover that from pure and simple exhaustion they are unable to drive properly. This is exceedingly dangerous. Failure to exhibit the fundamentals of courtesy comes in for its share of trouble also.

An unavoidable and yet partially avoidable cause of accidents on the highways is mechanically unsound cars. This does not cause nearly so many accidents as the general public sometimes thinks it does. The real reason for this low figure is very obvious for these older cars are traveling much slower than the average speed of the road.

First among the definitely avoidable causes of accidents I will mention that infernal, potential death stalker of our highways, "Florida's Sacred Cow." This situation of cows on our highways is giving our good state a black eye and thus unfavorable comment among travelers. It is true that a few other states allow them on their highways, but that is no reason why our state should be in the backward class and still let them remain there as a menace.

In our own United States during 1935 there were thirty-seven thousand people who entered the highway alive, but who received instant death or death due directly to an accident that took place on that highway. Just this past week the Associated Press carried a news item to the effect that at the present rate the highway mortality would reach the all-time record of thirty-seven thousand five hundred for this year. Certainly that is a ruthless sacrifice of human life. Death is but a small part of the loss. Many more are injured than are killed, and too many of these are totally and permanently disabled. Then come the costs of medical care, hospitals, and the financial losses from being unable to work. Aside from the monetary losses we must take into account the mental anxiety, the worry, the sleepless nights and days that the family, not the patient, must have thrust upon it. You and I can name several of our outstanding, most beloved citizens, whose lives were snuffed out right in the prime of their careers. Their family's loss was great, but society's loss was greater.

The next one of the hazards is one too frequently associated with the automobile accident and that is the use of spirits. We too often can find that the use of spirits was in all probability the major contributing factor to the accident. If it is impossible for one to remain sober enough to drive carefully then he should stay off the public road and thereby not be a menace to the entire army of the traveling public.

This is also the season of the year when may people will be celebrating the occasion of Christmas by the use of fireworks. In careful hands these things are all right, just as firearms and ammunition are. But many slips are made and many accidents will occur. Children are often the sufferers since they play with the firecrackers and cap pistols more than adults do. Instruct your child in the proper use of these dangerous things and it will pay you great dividends.

Gunpowder will not only cause a skin burn, but the explosion of it will tear away skin, muscles, bone and all and thus leave a permanent deformity. When a burn or in-

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jury of such a kind does occur, treat it conservatively, call your family physician at once. He will then tell you what is the best thing to do for that particular burn for the treatments will vary with the damage done. One of the most complicating factors always in burns is infection. This frequently is mild and gives no real trouble, but it may be one of the serious kinds, such as erysipelas, true blood poisoning, or tetanus. Any one of these is a serious complication. The alert physician will always advise in cases of powder burns that tetanus antitoxin be given to the patient unless there is some real reason why that particular person should not receive it. The germ which causes this dreaded disease is known as the tetanus bacillus. Its spores are extremely resistant to everything. Even the heat of the manufacturing process frequently fails as does the heat and force of the explosion of the gunpowder fail to destroy them. This antitetanic serum is given into the body of the accident victim to help protect him from the effects of tetanus bacilli should they also enter. The same thing can be said about puncture wounds, compound fractures and the like, for tetanus also is a severe complication in them.

Many millions of people will sit down to a veritable feast during this month, and will eat a great deal more than is good for them to eat. When you or I do that thing we are doing nothing but making our body take care of more than it is normally able to take care of. The net result will be that the intestinal tract will rebel against it, or the tract will go ahead and complete its task of digestion and the general body systems will then be called upon to dispose of the excess. Right now our type of foods differs somewhat from that taken in midsummer. We are now indulging in the concentrated and rich foods, such as fruit cakes, pastries of all kinds, meats and the rich dressings, sweets and many others. Many of our cases of so-called food poisonings are the result only of our over-indulgence in eats. Much nausea and vomiting and even diarrhea will follow. A really bad case of illness can be brought on by our inability to say "no" at the correct time. No piece of machinery, and our human body is a highly specialized machine, can work efficiently when it is overloaded.

Just what harm can be done by things of that sort might be asked? They are more numerous than you would expect. The intestinal tract is overworked and must take a certain time off for rest. What happens then? There will be an accumulation in that tract of things that should be expelled and are not. Putrefaction takes place, we absorb these noxious products, and will become more and more toxic and constipated before we are aware that anything much is wrong. Then, while the body is at that low ebb, will be an excellent time for a bad cold to begin, a pneumonia to start, or any other infection, for that matter; and it will always be a severe one, too, for we will be unable to properly combat it.

In just a few words let me sum up some of the more important points mentioned in this short talk. Let us make it a happy time for all. Be considerate and courteous and careful in driving, and thus avoid an accident. This is mostly to protect the other fellow. Care in the use of firearms and fireworks should be our watchword. That is to protect the other fellow and also ourselves. Now for the last item which concerns only the individual. Be conservative with your eating; do not overeat for it will be at your own expense if you do that thing. Remember these few simple words and enoy a MERRY CHRISTMAS and a HAPPIER NEW YEAR.

IMMUNIZATION*

S. C. HARVARD, M. D.,
Brooksville.

Medicine is divided into two branches; the prevention of disease and the cure of disease. This evening I would like to talk to you for a few minutes on one phase of prevention of disease; namely, immunization.

By immunization is meant roughly the body's resistance to disease. This may be either natural or acquired. When we speak

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of an individual having a natural immunity to a disease we mean that that individual has the resistance to the disease within his own body without having had the disease previously or having had any vaccinations or innoculations against the disease.

Acquired immunity may be divided into active and passive.

Passive acquired immunity is that immunity which is brought about by the introduction into the body of a solution of antibodies already manufactured to protect a person from a particular disease. An example of this is the use of serum from a person who has had measles to protect a child from having measles who has been exposed. Another example is the injection of a solution of antibodies in the form of antitoxin such as diphtheria antitoxin when a person has been exposed to diphtheria. Usually an infant up to six months of age has a passive immunity to contagious diseases acquired from the mother.

One form of active acquired immunity to a disease may be brought about by having the disease in question. We are all familiar with the fact that in certain diseases such as typhoid fever that an attack usually brings about an immunity from this disease for the rest of the person's life. The reason why a person is immune to a further attack of the disease is thought to be due to the fact that in overcoming this disease the body has manufactured certain defensive agents known as antibodies. These antibodies act only in defending the individual from that particular disease from which he has recovered and usually remain in the body in sufficient quantities to protect the individual from that disease for life.

Another form of active acquired immunity which is also called artificial immunity is that brought about by vaccinations and innoculations. Immunization in this case is brought about by introducing into the body certain agents which will cause the patient to manufacture sufficient antibodies to protect him against the disease. This protection usually lasts a varying length of time according to the ability of the patient to manufacture antibodies and the disease against which these antibodies are manufactured. Unfortunately, we cannot provide an immunity for all diseases.

Artificial immunity probably had its beginning with Edward Jenner in 1796. It was in that year that he announced his vaccination against smallpox. For almost a hundred years then until 1885 when Pasteur developed his method of immunization against rabies very little was done along the line of artificial immunization. Since 1885 a great deal of work has been done along this line. We are now able to prevent such dread diseases as diphtheria and typhoid fever. Recently there has been quite a bit of work done on scarlet fever, whooping cough, bacillary dysentery and measles. This work has been very encouraging and we have every reason to expect definite control of these diseases in a short while.

Doubtless we are all familiar with the ravages that smallpox made on the human race during the "Dark Ages." Because of Jenner's work this disease has become a rarity. However, it is not extinct and every now and then we read of an outbreak in certain communities. During the past three years there have been eighteen cases of smallpox reported in the State of Florida but fortunately no deaths. If we become careless in not protecting ourselves and children from this disease it will again flourish as it did in the eighteenth century. Vaccination against smallpox is a rather simple procedure and preferably should be done during infancy around the age of three to four months. At this age the reaction is slight and usually the vaccination "takes" very well.

Around the turn of the century a good bit of work was being done on immunization against diphtheria. This, like a good many other procedures in immunization, was not perfect to begin with, but has gradually been developed to such an extent that we can now promise an immunity to this disease for life. At first we could only offer passive immunity by means of injection of diphtheria antitoxin. This immunity lasted only for a short time—two to three weeks—after which time the individual was just as likely to develop the disease as before. Next toxin-antitoxin was developed which was given in three doses at weekly intervals and which usually gave adequate immunity in about 75 per cent of the cases. In recent

years a diphtheria toxoid has been developed which will give an adequate immunity in 90 to 95 per cent of the cases. This toxoid may be given in one or two doses and usually requires two to six months for an immunity to develop. You may wonder how we are able to definitely find out how an individual has an adequate immunity to diphtheria. This is ascertained by means of the Schick test. This test is done by injecting a very small amount of diphtheria toxin into the skin. If the person injected is susceptible a definite reaction will occur showing that this individual does not have sufficient antibodies to protect him from diphtheria. In other words we can definitely determine by means of the Schick test whether an individual is susceptible to diphtheria, and, in case he should be, we can definitely develop an immunity. By checking this individual with the Schick test we can be sure that this immunity has been developed. Most authorities agree that immunity to diphtheria can best be developed by means of the diphtheria toxoid. The ideal time to develop this immunity is at the age of six months. The appalling fact is that here we have a disease for which we have a test to determine susceptibility and a definite agent to produce immunity and yet in the State of Florida there were reported 1,369 cases of diphtheria in the past three years with 198 deaths. By giving diphtheria toxoid when the infant is six months old, as it is losing its passive immunity acquired from the mother, there should be no reason why diphtheria should not be stamped out altogether. This can never be done by the doctors alone but rather by the intelligent cooperation of the parents and the doctors.

Typhoid fever within the past 25 years has become more and more rare. However, during the past three years there were reported 481 cases of typhoid in Florida with 167 deaths. This is a disease which has in the past claimed many lives but there is no reason why it should not be eventually stamped out also. Most authorities agree that immunity against typhoid should be begun early in life, around two years of age, as it is not only more necessary then than later but it causes the child less discomfort than when done for the first time later in life. Unfortunately this immunization does not protect one for life and should be repeated every three years.

Recently there has been some very good work done on immunization against whooping cough by means of whooping cough vaccine after the method of Sauer. This is still somewhat in the experimental stage and cannot be relied upon absolutely but we feel that it is of some value and should be given about the age of eight months.

Vaccines have also been made for rabies, cholera and Rocky Mountain spotted fever which have been proved to develop a definite immunity to these diseases. At present a great deal of work is being done on vaccines for pneumonia, meningitis and poliomyelitis or infantile paralysis.

It is well to call to your attention tetanus and gas gangrene antitoxin. Like rabies it is not practical to immunize an individual against these infections unless the individual has received some injury which might develop into one of these diseases. Such injuries as puncture wounds, gun shot wounds, compound fractures, powder wounds and contaminated wounds should certainly be given prophylactic doses of tetanus antitoxin and in some instances gas gangrene antitoxin.

I have tried to outline in the time allotted to me the important factors in immunization. Your State Board of Health is doing a wonderful work in immunizing against typhoid fever, diphtheria and smallpox, children of school age but the important thing is that they cannot get to the child in most instances until he is six or seven years of age. That means that there is at least about five years lapsing between the time the child loses its passive immunity acquired from the mother and the earliest possible opportunity for the health authorities to immunize the child against these diseases. During this five years we have no way of being sure that the child will not develop any of these diseases if exposed. Remember, about 75 per cent of diphtheria cases reported are in children between the ages of two and six years. It is true that some children have a natural immunity to some diseases, but we have no

assurance in any case. Immunization of the child in infancy and early childhood is a very good form of health insurance. From an economic standpoint, usually the child can be immunized from all these diseases at a lower cost than for which any one of them can be treated. This is a minor consideration, however, and the one thought which I would like to leave with you is that you are exposing your child to disease with its resulting ill effects, and in certain instances to death, all of which could be prevented by consulting your family physician or county health officers, and having your child properly immunized against these diseases.

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THE X-RAY IN EARLY DIAGNOSIS*

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Ocala.

Medicine is a constantly growing, progressive science that is built with meticulous care and careful consideration upon established facts, to be used for the preservation of health, the alleviation of suffering and the cure of disease. Progress in medicine is fostered by investigation and research, but the cornerstone upon which the practice of good medicine rests is correct diagnosis.

During the past four decades clinical diagnosis has steadily improved in accuracy, due in part to a wider, general knowledge of disease, but more particularly through the various laboratory procedures and special methods of examination.

The discovery of the roentgen ray in 1895 made available a diagnostic procedure of rare precision and, although being among the youngest of the medical specialties, roentgenology has made rapid progress in diagnosis and treatment of disease. New methods have appeared, such as the study of the gall bladder, the kidney, the uterus, the spinal canal, the lungs and gastro-intestinal tract, by the use of opaque media which casts shadows of the various organs or regions on the fluoroscopic screen and on the sensative x-ray film. Present-day diagnosis and treatment of diseases of the brain is made possible by radiograms after the introduction of air into the cavities of the brain.

The value of an x-ray diagnosis depends on the skill and training of the roentgenologist, and it perhaps is not necessary to say that he must not only have a thorough medical education, but special training in his particular field. He is, therefore, a medical consultant and, as such, assists the surgeon, the general practitioner and other specialists in diagnosing and treating disease.

Today radiographs can depict practically every part of the human body. They give accurate information concerning the bones, the different tracts, the body cavities, the individual organs and the soft tissues. They give an exact picture of the normal and the abnormal. Suspected disease is confirmed or ruled out. Diseased organs or tissues may be discovered long before they have a chance to produce noticeable signs or symptoms. When discovered in the incipient or early stages many diseases yield readily to treatment; if detected late irreparable damage may have been done—a cure may be impossible. How often do we see people crippled and deformed, due to fractures that were not detected at the time of accident or were not properly treated? How often in x-ray examinations do we see cancerous growths that are not discovered until the case is utterly hopeless.

The first general use of the x-ray was in examination of bones and it is still considered indispensable in diagnosis of fractures and bone disease. X-ray films in several planes show accurately the type of

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fracture, the position of the broken parts and enable the physician to properly reduce the fracture. In crushing injuries to the extremities, an x-ray examination may be the deciding factor as to the advisability of conservative treatment or amputation. In this day of increasing automobile and industrial accidents, the x-ray film or fluoroscope determines accurately and timely the extent of damage done. In such examination, skull injuries of grave significance may be detected at a time when treatment is urgent. Fractures of the spinal column are clearly visualized; dangerous displacements are detected and replaced under x-ray guidance.

Not only are we concerned with the prompt discovery and treatment of bone deformities due to accident, but to those due to congenital and developmental defects. It is only in the past generation or so that much could be done for the cripple. The well-known "hunch-back" deformity is preventable today if discovered early enough; club feet are easily corrected in early life.

The medical profession lays much stress upon the early recognition of, and the removal of, focal infections. The discovery of an abscessed tooth on a dental x-ray film may prevent such complications as rheumatism, arthritis, heart and kidney disease. The early diagnosis and treatment of infected sinuses may prevent attacks of hay fever, asthma, bronchitis, bronchiectasis or other respiratory diseases. By periodic health examinations, using as indicated, laboratory tests and x-ray studies, we emphasize prevention of disease or early correction.

There is no disease in which early diagnosis is more important than in tuberculosis. Through a crusade by public health authorities, cooperation by the public, improved diagnostic methods, and more efficient treatment, this disease has been displaced from the second to the sixth place in the mortality rate. The childhood type of tuberculosis, in which the lymph glands of the chest are affected, depends on the x-ray for positive diagnosis. Postmortem examinations show that a large percentage of the population is affected at least mildly before the age of six. Any child with symptoms suspicious of chest tuberculosis should not be denied an x-ray examination. In adult pulmonary tuberculosis, the disease may be discovered by x-ray examination before clinical signs are definite, or before the laboratory tests are positive. This detection of early tuberculosis has saved many lives as in this stage the disease is very limited and usually responds to treatment. Under x-ray guidance, treatment of more advanced tuberculosis by lung collapse (induced by injecting air into the pleural space or the surgical removal of ribs) is now arresting or curing many cases that were a few years ago hopeless. Periodic x-ray examination is a necessary routine from the inception of tuberculosis until cured.

X-ray examinations are valuable diagnostic aids in pregnancy. Such graphic information decides before labor begins whether a normal or abnormal delivery is expected. No method of examination is comparable to the x-ray film in detecting abnormalities in the unborn, in determining the size of the fetal head, in measuring the diameters of the maternal pelvis. It is a well known fact that external measurements are only approximately accurate—measurements on the x-ray film are accurate to within one or two millimeters. Not only does x-ray examination of the expectant mother give an accurate reconnoitering of the condition of the pelvis, but it shows fetal position, determines whether single or multiple, dead or alive. The obstetrician from such valuable data anticipates the type of delivery as normal, instrumental or cesarean—it is time-saving and often life-saving.

The greatest task that confronts the medical profession today is the control of cancer. It is definitely on the increase and is the cause of more deaths annually than any other malady except heart disease. Its early discovery, when the growth is entirely local, offers the best chance of cure. At this time before the cells have scattered to distant tissues or organs, many cures are effected by surgery, x-ray and radium. Early diagnosis necessitates keen appreciation of the patient's history, a complete physical examination and appropriate spe-

cial examinations. Only about 20% of stomach cancers can be effectively treated at the time diagnosis is made—the majority are so far advanced that cure is impossible and any treatment given is for palliation only. The responsibility for eradication of malignant disease rests largely with the general practitioner and the public itself. The early signs and symptoms of cancer often resemble those produced by conditions of no serious import and hence are often disregarded. Only the patient is aware of the symptoms and only he can bring them to the attention of the physician. Any patient suffering from chronic stomach trouble should have a thorough x-ray examination which, with other tests will indicate the nature of the trouble. It is a noticeable fact that through the medium of the x-ray, as a diagnostic procedure, many lesions of the digestive tract—such as ulcers, diverticula, tuberculosis and cancer are being discovered earlier and at a time that treatment may be effectively administered.

The diagnosis of bone tumors is in most cases made by means of the x-ray, which will also aid in determining the type. If the lesion is benign, appropriate treatment is begun; if of dangerous type, such as sarcoma, early amputation of an extremity is usually the only chance of a cure. However, certain types of these tumors also yield to treatment by x-ray and radium. An accurate diagnosis therefore is very important as, otherwise, a leg or arm might be needlessly sacrificed when less radical treatment might suffice. These bone cancers remain local in character for only a short period; cancer cells are soon scattered to the lungs and other regions. At this stage of the disease few cases are benefited. There is, therefore, only one rational approach to the fight against dangerous tumor growths—early discovery and early treatment administered by competent physicians.

Before the use of x-ray and the cystoscope in the examination of the urinary tract, many patients suffered and even died. Kidneys were destroyed by large stones; other parts of the tract were obstructed by strictures, kinks and adhesions; tuberculosis was discovered only in the late stages; unseen cancerous growths did their deadly work. But today, due to better methods of examination, all such conditions can be discovered and treated early enough to often cure, or if not cure, most certainly prolong life.

The correct and accurate diagnosis of disease is the greatest concern of the physician, and the value of x-ray as an aid and important factor in diagnosis is unquestioned.

PRENATAL CARE*

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Motherhood is the crowning glory of womanhood and generally is assumed to be the normal outcome of the marital state. The tenderest maternal care always should be conserved; but it must be borne in mind that the woman in modern society does not necessarily come to her task of motherhood fully equipped with knowledge and skill to raise her baby successfully. Maternal instinct and traditional ways of bringing up babies do not necessarily guarantee safety. In primitive society, where one thinks of the baby as born and brought up with few frills, the early infant mortality was high and the average life of mothers who bore many children all too brief. Modern methods of public health have lengthened the lifetime both of mothers and of babies. A scientific study of the rise and fall of populations indicates that the prevailing attitude toward women and children usually determines national destiny.

It always has been difficult to rear successfully the coming generation. Nature at its source is prolific even in mankind but the difficulties and dangers leading to maternal and early infant mortality and morbidity are usually great.

Most men as well as women assume that childbirth will take care of itself as long as a good doctor is present at the time the baby is born. But, unfortunately, this is not the case. It is increasingly impor-

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tant for both husband and wife to know that prenatal care may be the means of preventing developments of a serious nature. A woman tends to think too little of the risk.

Why is it child bearing so often ends tragically? Is it the fault of the medical profession? In a large majority of cases, no! The fault lies at the door of the general public and particularly of the women. Hospital records show that 75 per cent of the obstetric tragedies occurred to women who had no medical attention previous to the onset of labor. The medical profession has stressed the importance of prenatal care. Warnings have been delivered by magazines, by newspapers and by radio.

What is prenatal care? Prenatal care is the medical guidance of a pregnant woman throughout pregnancy. It must be sufficiently intelligent, conscientious and frequent to detect and control conditions which might otherwise result in harm or death to the prospective mother.

Who should receive prenatal care? All expectant mothers whether in their first or subsequent pregnancies should have this care. The physician aims to correct any physical defects, to institute proper diet that will insure a healthy baby and to save the wear and tear on the physical well-being of the mother.

How many actually benefit by prenatal care? All those who receive this care as it should be given will benefit in the following ways:

They are relieved of all anxiety. The importance of this aspect of prenatal care cannot be over-emphasized. It should mean much to the peace of mind of the prospective young mother whose ears are filled with tales of disaster, brought to her by well meaning but stupid friends. And it should mean just as much to the solicitous but helpless husband.

Adequate prenatal care helps to keep well women well. Fortunately this group includes most pregnant women. Such ailments as they have are insignificant. They may or may not require treatment, but the decision should be made by the physician in charge. A headache, even a persistent headache may mean merely constipation, or it may be a simple migraine, or it may be the forerunner of convulsions. This is for the doctor to decide.

Most important of all, adequate prenatal care will sift out those women in whom complications are developing or who are stumbling blindly into a stormy or impossible labor. This is the group the doctor must reach. These are the women for whom the doctor can do so much if they will but let him. Complications can develop or exist in the woman who is seemingly in good health! Therefore all pregnant women should have adequate attention.

What are the details of adequate prenatal care? A physical examination is essential. At the first examination the existence of a normal pregnancy is determined. The measurements of the pelvis are important. In general, they indicate whether the pelvis is normal or whether it is deformed. Such knowledge in advance of labor sometimes means the difference between a live baby and a dead baby and the difference between a mother restored to good health and a mother partially disabled. The condition of the heart, the blood pressure, the kidneys, the urine and the thyroid gland should be determined. The patient's weight should be registered; the average gain throughout pregnancy is a total of one-fifth of the body weight.

Typical instructions for the pregnant woman are contained in the following list of general rules:

Visits: It is essential to go to the doctor's office every four weeks the first seven months and once every two weeks thereafter. It is well to make a written list of questions to avoid forgetting any.

Clothing: Wear comfortable clothing and avoid abnormal constriction and high heels. Any clothing which is supported from the waist is undesirable for an expectant mother. The weight of the clothing should hang from the shoulders.

Exercise: During normal pregnancy the woman should be encouraged to take as much outdoor exercise as possible, though in individual cases it is often difficult to specify the exact amount—a safe rule being to desist while still feeling that she could do more without tiring herself. Exercise should consist of walking, driving or motoring over good roads,

but the ordinary sports should be interdicted, though in the early months sea bathing is beneficial. In the later months avoid long journeys by auto, train or steamer.

Rest: While moderate exercise is important, rest is equally important. The woman should lie down for an hour after the midday meal. Sleep is not essential, but the clothes should be loosened and the mind diverted from its usual channels.

Diet: The welfare of the child as an individual really begins at conception. At that moment, heredity is sealed. From that time on, the developing organism depends completely on the welfare of the mother. A marvelous process, all too little understood by the prospective mother, is being unfolded under conditions which should be made as favorable as possible during the nine eventful months before the "blessed event" takes place. Birth is simply an incident in the larger life process, an incident fraught however with great potentialities for good or ill. To aid this wonderful process of development the expectant mother must regulate her diet. Heredity has much to do with the determination of the looks of a baby, but even heredity may be almost defied by the expectant mother if she regulates her diet so as to insure well formed bones and teeth. The material for the construction of the teeth consists of 85 per cent calcium with a small proportion of phosphorus and other substances. As the teeth are in the process of formation long before the baby is born the mother's blood must supply these minerals. Therefore, for the child as well as for her own needs, the prospective mother should plan her daily diet so that milk, leafy vegetables, whole grain bread and other whole grain cereal foods are included in proper amounts. If food sufficient in quality or quantity is not supplied her own body substances are drawn on to supply these deficiencies. This, of course, can go on only to a certain point. If the mother is not receiving sufficient mineral salts or other food elements the growing baby will draw on her reserves in the bones and teeth and on her store of fat and protein.

It is well known that if iodine in the mother's diet is insufficient the child may be born with a thyroid deficiency. In certain parts of this country the lack of iodine is so great that babies are born cretins, with marked physical deficiencies.

A number of mothers suffer from anemia during pregnancy. The growing babe must have sufficient iron and this must be obtained through the mother. It is highly important then for her to have foods rich in iron. On the other hand, it is a fallacy to believe that the expectant mother should eat for two. Excessive eating may be harmful for both mother and child. A well balanced, wholesome dietary, slightly in excess of her normal requirements is all that is needed to keep the mother in good condition and to provide normal growth and development for the baby.

Dental Care: The expectant mother should see her dentist early in pregnancy. Teeth with cavities should be filled. His advice should be obtained regarding extraction of abscessed or infected teeth. It is essential to see the dentist regularly during pregnancy.

Acute Infections: The acute infectious diseases attacking the prospective mother may seriously affect the unborn child and result in premature birth. This is the case notably of influenza and the pneumonias. The prospective mother, therefore, should be protected in every way against these diseases.

Unusual Symptoms: Report promptly any of the following symptoms: severe or obstinate nausea and vomiting, severe and persistent headache, prolonged constipation, disturbances of vision, swelling of the feet, hands or about the eyes, or spots before the eyes. These are the danger signals and should be recognized and reported at once. No one but the doctor should tell the expectant mother what to do. She should not depend on the advice of her next door neighbor. Many women become unnecessarily frightened by the long list of "don'ts" given by the solicitous neighbors. The doctor is the only one who can be depended on to point out what should be done.

In conclusion let me stress the advisability of every expectant mother seeing her physician early in pregnancy. She should have a complete physical examination, and periodic examinations throughout her pregnancy. She should be impressed as to the importance of correct diet and exercise. The expectant mother should give careful consideration to unusual symptoms — persistent headache, swelling of the feet and about the eyes or spots before the eyes. Every expectant mother, no matter in what station in life, should have prenatal care.

THE RESPONSIBILITY OF THE LAITY TO THE INDIGENT*

J. S. TURBERVILLE, M.D.,
Century.

Every community, large or small, has a number of individuals or families classed as indigent. They have not even the bare necessities of life, to say nothing of funds for the proper medical care. Every one who is self sustaining asks the question: "Who is going to take care of these people?" This is answered to a certain extent by the different organizations for charity, that is to say food and clothing are provided. Nothing is said or done about medical care except that some are cared for by the city or county health units. This constitutes only a small portion of those who really need care.

The responsibility of medical care is shouldered directly by the medical man of the community. Every one says: "He is the one to take care of these people." I agree with them, but he needs help in this, and as a general rule this is not forthcoming from laymen. They usually wait to see what will happen. The laity of this country should help provide these things, and should accept it as part of their responsibility. Some may argue that they have given to the different organizations. What of it? The medical man has done this and more. He has given of his time, knowledge, and is usually willing to do more. I heard of an incident that happened in a certain community. A prominent man called the Doctor on the 'phone and said, "Doctor there is a widow with six small children, and she needs an operation; I wonder if you will take care of her for charity's sake." The Doctor's reply was, "I will meet you half way. You pay the hospital bill, and I will gladly give her my services." The man said, "I will call you later." The Doctor is still waiting for the call. Such things happen every day.

I once interviewed a pharmacist who was proprietor of a drug store also. He told me that if I would mark my prescriptions "Indigent" he would gladly give the medicine needed. Every one in the community classed as the laity should look upon these things as the druggist did. Doctors have left their beds in the middle of the night, and made calls several miles away, knowing before they left that they would not receive any remuneration whatsoever. What percentage of the people of this country would do this? A very small number I imagine. Some of them won't even assist by doing a neighborly act. I could go on and on giving incidents that have occurred in all parts of this country, and in the practice of all Doctors, but I will refrain and go into detail further about my original subject, as I am afraid I am only giving our side of it.

If there is any one in a community or town who is in dire need it should be reported immediately and then the public and the Doctor should get together to see what can be done. A scheme can always be worked out by which the needy person may be taken care of without too much hardship on any one concerned. It might be said that the Government of the United States has provided for this, but not adequately. The lazy, shiftless, and indigent are all in one group, as you might say, in one bag. The bag is shaken up and whichever should happen to fall out is the one who gets the help. Until these are separated we will never arrive at a definite plan of government aid. It has been tried and won't work. This problem is the motherless infant of all the people of this country, and not just that of the medical profession.

In the cities and larger towns of the country there are numerous clinics, and receiving wards maintained by the state or city governments, by medical schools, and charity organizations. The situation in these cities is not so deplorable as it is elsewhere, though they do not even come close to caring for all the needy. A certain number of these are people who are well able to care for their bills and, by hook or crook, gain admittance to these clinics. It is a task to stop them once they have passed the doors. The social service workers do the best they can, but they are tricked in many ways into putting their stamps of approval on undeserving individuals. These individuals are depriving some one who is needy.

I have been in homes to see patients where I had not the conscience to make a charge, and the responsible party has said to me: "I will pay when I can, Doctor." I would answer by saying, "All right." Of course there are any number of "dead beats" with whom one comes in contact, but they can always be spotted. The ratio of needy in the city and in

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the country is widely separated. There are many more in the city according to the population than in the country, for the farmer can grow some of his own foodstuff, and thereby relieve some of the pressure. His neighbor who might be needy can usually get his foodstuff from the adjoining farms for a small amount of work.

The community spirit should be to help the needy where they deserve it, and this should be determined by a social worker who knows almost every one in his or her particular territory. This would eliminate many people who are masquerading as needy. The doctor could cooperate and attend people who are really in need of medical aid. This would lift a big burden from his shoulders for he would gladly give to those who deserve it. The spirit of cooperation should prevail in every integral section of the country, every one share the burden and not let just a few do all the work. There is no definite plan to work on, as each city, town or community has its own problem to work out. It should be that every individual answer his responsibility, and thereby make a large responsibility shared by all. No one will have too much then.

The church should be the center of all activities for the poor, medical or otherwise. Candidly, without malice or prejudice, I do not think that the church organizations have lived up to their opportunities. I think, however, that it is due to lack of leadership. Too much attention has been devoted to preaching and the social side of the church, and practically none to the people who cannot help themselves.

Conclusion: The following is an outline of the responsibility of the laity to the indigent. (1) Determine who the indigent are, and then work out their needs for them—whether medicine, shelter, clothing or food. (2) Then appoint a committee to see that these things are cared for, but not let one committee serve too long; always make frequent changes. (3) If it is medical, have a medical committee attend to it, and determine whether it be tonsils, hookworms, food deficiencies, operations, deliveries or whatnot. (4) Attend to all of these as speedily as possible, and allow no one who is deserving to go lacking.

Lincoln's speech at Gettysburg said "that all men are created equal." Possibly so, but they do not remain so.

CHILDBIRTH*

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Panama City.

Ladies and Gentlemen: Greetings from the Florida Medical Association. We, as physicians in the great State of Florida, feel it is our duty to preach and teach preventive medicine and surgery just as it is our duty to prescribe and treat sickness and injury. With few exceptions, we make our livelihood by virtue of the misfortunes of our fellowman, and looking at it from a mercenary standpoint we should go about telling people how to get sick. However, I believe you will agree with me, when I say that if the layman would do as much toward prevention of disease as the doctors do, then we would make more progress toward better health. Yes, 'tis true, the health problem, both preventive and curative, is our business but we need, we beg for, and we must have, the help and cooperation of the laymen, individually and collectively, if we go very far with our constructive health program.

If our nation continues to progress and prosper the process of "having babies" must go on, so let us for the moment think about the ever-present, too often disasterous, procedure called "childbirth." The physicians who are members of organized medicine in the State of Florida are having to apologize for our high maternal and infant mortality and morbidity rates as compared to those of other localities. We do not feel it is altogether our fault for we believe the victims are largely to blame. To some people giving birth to a child is just a procedure that needs no thought or care,—just let Nature take its course. These people do not consider their future health or what kind of offspring they produce. We hope that education will change their attitude and inspire them to make an effort to obtain healthy bodies and produce strong, healthy babies. These poor, ignorant and irresponsible people will have to be reached by public health organizations, church and charitable organizations and by legislation.

To those of you who are intelligent and have a sense of responsibility; who want to

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produce the right kind of offspring, not only for your own pleasure and happiness, but that your children may be mentally and physically fit to sustain and better a nation; to you who wish to remain healthy enough yourselves to care and prepare them for their part in life, I want to direct my remarks. It is true that many women become pregnant not by choice, would like to have the pregnancy interrupted, and often do. I presume we will have these with us always to elevate our maternal mortality and morbidity rates, as birth control, sterilization and pregnancy preventive measures are yet far removed into the future. There are many young, healthy and intelligent women who are eager to have children—some so eager that they adopt them—but for some known or unknown reason they cannot have a baby of their own flesh and blood. To these women, also their husbands, I extend my heartfelt sympathy. God gave to most of us the power to create and reproduce our own kind, and no greater happiness can come to a family than when the stork brings a gift from heaven, especially when the event has been planned, wanted and anticipated.

It is not always the ignorant and poverty stricken woman who will go through a pregnancy with a carefree attitude, neglect herself and be unmindful of the unborn baby; our intelligent and well-to-do women are guilty of the same conduct. Babies being born is an everyday occurrence; probably this is why it is looked upon too lightly. But individually it is not an everyday occurrence, and is indeed a noble and heroic feat. Just because giving birth to a baby is a normal and natural procedure does not mean that it does not carry with it fear and danger. Any woman who assumes the task of motherhood should be honored and glorified for her bravery and efforts, for every woman born into the world cannot become pregnant; everyone that becomes pregnant cannot carry the pregnancy to full term; everyone that carries the pregnancy to full term cannot have a living and healthy baby; and everyone that delivers a living and healthy baby cannot live to realize her accomplishment. This, my dear friends, is something to think about. However, I think the dangers and hazards of childbirth can be minimized to a great extent if a little forethought will be exercised. Very few people build a home without doing some planning or buy an automobile without doing some financing, so why not do some serious thinking before bringing a human being into the world lest you jeopardize your own health as well as the newborn babe.

Obstetrical care is divided into three main phases: prenatal, which is the phase from the beginning of the pregnancy until the beginning of labor or the actual birth of the baby; the actual birth of the baby; and the convalescent period, from the time of the birth of the baby until complete recovery, usually six weeks in duration. Now I would like to add another phase with all apologies to the authorities. This I will call pre-pregnancy stage. This is from marriage until conception or from complete convalescence until re-conception. This is the phase I consider very important and often neglected. Really I do not think a woman or man should marry with the expectation or possibility of having children without assuring themselves that they are physically fit or at least have a knowledge of their abnormalities. As soon as a woman marries right then she is a potential mother and should be mindful of the fact and conduct herself accordingly. At the very earliest convenience after marriage, if not before, a potential mother should take inventory of herself and be assured that she is qualified for the contest in which she may be called upon to engage. She should present herself to a qualified physician for a complete physical and chemical examination. This, of course, to a timid bride is oftentimes embarrassing, but she has a duty to perform and should know her possibilities and capabilities, her weaknesses and abnormalities, if any, with reference to her becoming pregnant. If after the examination she finds that she is not quite up to the peak of health, corrective measures should be instituted as far as possible to get to the peak of health. If she discovers that pregnancy would be to her disadvantage and would jeopardize her life and health, then I think she would be justified in seeking measures to prevent such a catastrophe. Too many women present themselves to

the doctor with an established pregnancy, and the doctor finds that they are not physically fit for the contest and cannot be made so due to such diseases as tuberculosis, heart and kidney disease, syphilis and even cancer. The situation then becomes terrifically complicated with disaster looming. To interrupt the pregnancy would jeopardize the life and health of the potential mother; to allow her to continue with the pregnancy would do likewise; then, too, religious beliefs have to be considered. So you can readily see the importance of this pre-pregnancy care. Therefore, I beg you who anticipate becoming mothers to do your part and cooperate with your doctor in a combined effort to establish and maintain health and happiness.

Next is probably the most important phase of obstetrical care, and this is prenatal care. As soon as a pregnancy is suspected the prospective mother should at once consult her doctor, put herself under his professional care, for the contest has begun and an able coach will aid considerably in carrying her through the game victoriously. The pregnant woman should be the most concerned about the affair and it is up to her to be assured that her welfare is being safeguarded. If it is within her power she should not tolerate indifferent treatment whether it be from her friends, relatives or her doctor. She should be concerned about her physical condition and want to know if her body functions properly. She should know the whys and wherefores of her blood analysis, blood pressure readings, weight recordings, and urine examinations. She should be eager to know what she should eat and wear and be especially curious of prenatal hygiene. She should be inquisitive about anything that might be puzzling to her. If she is pregnant for the first time she should be concerned about her pelvic measurements, that is, whether her bony pelvis is sufficiently large to allow the passage of a normal-size baby. She should remember that during this prenatal phase she is laying the foundation of this baby's life and health. She should strive most earnestly to give this little one the best she has.

The success of the second phase, the actual birth of the baby, largely depends upon the doctor. If he has the proper qualifications, a well prepared specimen to work with, and the proper environment to work in, then the outcome should be satisfactory.

Last but by no means least in importance is the convalescent phase. The success of this period depends largely upon nursing care and hygiene. Permit your doctor to be the guiding star especially during the first ten days of this period, for it is during this stage that you will receive much erroneous advice from friends and relatives. Just because most women are out of the sick bed and going about in ten days after the birth of their babies they should not consider themselves well, for it is the concensus of opinion of the authorities that convalescence is not complete for at least six weeks. They should be considered as obstetrical patients until this period has passed. At the end of this period all such patients should insist upon an examination to ascertain whether they have returned to normalcy, and if not, treatment instituted to correct any abnormality. Another examination should be made at the end of three months, for the best treatment we have at the present time for cancer is prevention and early recognition of its existence. Patients should insist that these measures be carried out.

I will not attempt to discuss the care of the newborn child, but I would like to say this: Mothers, please nurse your babies if possible. The modern trend is to shirk this duty, but I believe if a mother wilfully and deliberately refuses to nurse her babe at her breast she is sinning against her child and should be held accountable for the misdeed. After you have gone through the ordeal of bringing the child into the world healthy and happy, then it is your duty to do your utmost to keep it so, for there is nothing more beneficial to the baby than its own mother's milk.

A baby is not alone a woman's responsibility, and I have this to say to the husband and father. The task of having a baby is not an easy one. With the best of care and surroundings childbirth takes its toll too often, so the best you can afford is still not good enough for one who so unselfishly sacrifices for your pleasure and happiness.

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RADIO BROADCASTS

This issue of the Journal, containing some of the radio broadcasts, should be interesting from several standpoints: first because the articles are written with a message simply and directly put so that the lay public will readily understand, and, second, because they show the honest effort of our profession to educate the public in a dignified and disalarming manner.

It can be said, without fear of contradiction, that *all* advances in the healing art, have come through medical education, research, and practice. We know this to be fact, but the public does not. Why it does not is largely our fault. Is it possible that if the people knew that the Basic Science bill, for instance, said in substance, that the law required a knowledge equal to that of a high school graduate's, wouldn't they have turned out and demanded it? It all goes to show that we need the public, and they need us. We know it; they do not seem to. The reason is that they do not know the facts, are not educated in the advances made in medicine for their protection and cure, and are led by more able talkers and advertisers. Radio broadcasting is one way to reach all classes of homes, all walks of life and all environments. Results may be slow, but this is a cog in the great machine that we should keep going. Medical propaganda of the truth, let the ax fall where it may, will come out victoriously.

Next year we will probably, along with a continuation of medical history and facts, attempt to educate our audiences to the point of making them aware that medical legislation is for their good far more than the profession's protection. Both are inseparable, but what is our protection is also the protection of our citizens.

Anyone attempting to refute this statement, regardless of whom it may be, is misrepresenting facts which can be readily proved. Let us prove this to the general public, our friends, and our patients.

Each member of the Committee on Public Relations has carried out his work, and is due the appreciation of the Association. May next year be as successful as the past.

MEETING OF MEDICAL GROUPS IN ORLANDO

The Annual Medical Postgraduate Short Course was held in Orlando the fourth week in June. The Orange Court Hotel offered unusually good facilities for taking care of this meeting. The faculty was composed of well qualified medical instructors and those who attended, by their close attention during class periods, complimented the instructors. The popularity of this medical short course also was evidenced by an increase in attendance. A larger number of doctors was registered this year than ever before. Toward the end of the session 135 doctors were registered. The official figures and report will be shown later by the Committee on Medical Postgraduate Course. This committee undoubtedly will feel very much encouraged by the interest of the medical men who took the time to attend this meeting and so faithfully attended the lectures.

The officers and members of the Orange County Medical Society did their part to aid the committee and entertain the guests, in Orlando. The fifth annual picnic and barbecue was staged Thursday evening, June 24 at the Flamingo Club. After the splendid feast,

a troup from Tampa put on a floor show, one of the outstanding features of this show being an acrobatic demonstration by one of the girls in the troup. The attendance at this evening's entertainment numbered more than 200 doctor guests from far and near over the state, as well as some out-of-state doctors who were included among the guests.

The Executive Committee of the State Association met at the call of the Chairman and spent many hours discussing some phases of the statements made in Senator J. Hamilton Lewis' address before the House of Delegates of the American Medical Association. A resolution was finally adopted which was transmitted by the Association's secretary to senators and congressmen from Florida in Washington, to the secretaries of state medical societies and to the secretaries of the component societies of our Association. The committee was honored by the presence of Dr. Walter L. Bierring, past president of the American Medical Association, who sat in as a consultant member. A number of routine business matters were handled by the Executive Committee before adjournment.

The Council met at the call of its chairman and enjoyed a very pleasant and constructive meeting. Eight of the twelve councilors were present and plans were approved for holding annual meetings in each of the six committee districts. A committee on arrangements is to be the senior councilor, the junior councilor and the secretaries of the component societies in each district. The first meeting was scheduled for the Northwest District "A." You will find in this Journal a complete program. The councilors also planned a study of the doctors licensed in the state who are not now members of the Association. With the aid of the secretaries of component societies, the councilors felt they would be able to submit some valuable information concerning eligible prospects for membership in the various districts.

The chairman of the Committee on Public Relations called a meeting of his committee for Thursday. A number of routine matters were discussed and plans developed for further service over the radio during the coming fall and winter. In this Journal you will find a reproduction of broadcasts by this committee, over Station WRUF the past year.

PROTEST AGAINST SOCIALIZED MEDICINE

The following resolution passed by the Executive Committee in session at Orlando, June 24, 1937, has been transmitted to our senators and congressmen in Washington by the secretary of the Association and copies mailed to secretaries of state medical societies and the secretaries of our own component societies. Note editorial comment in this issue:

RESOLUTION

"WHEREAS, the report submitted by the Delegates of the Florida Medical Association to the annual session of the House of Delegates of the American Medical Association at Atlantic City, June 7 to 10, 1937, indicates that a plan is being contemplated by the Federal, Executive, Administrative and Congressional authorities to place the practice of medicine in the United States as it involves the medical care of indigent persons, under Federal Government control, and

"WHEREAS, the Executive Committee representing the House of Delegates of the Florida Medical Association hereby affirms its willingness to cooperate at all times with the proper authorities in order to secure adequate medical care for all indigent persons, yet at the same time is convinced that such care is distinctly a community responsibility and is properly a function of the local governmental unit and local medical profession, and

"WHEREAS, Federal supervision of the medical care of the indigent without local control by the component medical units of the various State Medical Societies will destroy those principles which maintain for the public the highest quality of medical service and the possibility of improvement in this service.

"THEREFORE, BE IT RESOLVED, that the Florida Medical Association in justice to the medical profession of the state, hereby records its unequivocal opposition to and its unwillingness to cooperate in any plan that involves federal supervision and control of medical practice in the United States and will combat this with every means at its command, and

"BE IT FURTHER RESOLVED, that a copy of these resolutions be forwarded to the secretaries of all state medical associations with the recommendation that similar resolutions be adopted by such associations, and

"BE IT FURTHER RESOLVED, that copies of these resolutions be forwarded to all of our congressional representatives in Washington."

AMERICAN BOARD OF SURGERY ORGANIZED

In answer to the widespread demand for an agency which will attempt to certify competent surgeons the American Board of Surgery has recently been organized. This Board is a member of the Advisory Board of Medical Specialties which includes all of the boards of certification for the different medical specialties which have been already organized. Since boards were in existence for the certification of practitioners of some of the surgical specialties such as ophthalmology, otolaryngology, obstetrics and gynecology, genito-urinary surgery and orthopedic surgery it is expected that the American Board of Surgery will be responsible for the certification of general surgeons as well as those practicing in the remaining specialized subdivisions of surgery.

Acting upon the invitation of the American Surgical Association the following surgical societies cooperated in the creation of the American Board of Surgery: the American Surgical Association, the Surgical Section of the American Medical Association, the American College of Surgeons, the Southern Surgical Association, the Western Surgical Association, the Pacific Coast Surgical Association and the New England Surgical Society. The first three of these bodies which are national in scope have three representatives on the Board. All of the other societies have one representative each. The representatives of the cooperating societies are nominated by the society which they represent and upon approval of the Board shall become members of it. The term of membership on the Board will be six years.

The Board will hold its first examination (Part I, written) on September 20, 1937. All inquiries concerning applications for this examination should be received promptly by the Secretary, Dr. J. Stewart Rodman, 225 South 15th Street, Philadelphia, Pennsylvania.

PROGRAM
FIRST ANNUAL MEETING
OF THE
NORTHWEST COMMITTEE DISTRICT (A)
Apalachicola, Florida

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FIRST GENERAL SESSION

Thursday, July 15, 3 p.m.
Armory

Call to Order—
J. S. TURBERVILLE, *Senior Councilor*

Brief Addresses by State officers—
EDWARD JELKS, *President*
W. HENRY SPIERS, *President-elect*
SHALER RICHARDSON, *Secretary*
W. McL. SHAW, *Chairman of Council*

SCIENTIFIC SESSION

Presiding, N. A. BALTZELL, *Junior Councilor*

1. "Appendicitis," EDWARD JELKS, *President*, Florida Medical Association, Jacksonville. Discussion: AUGUST E. CONTER, Apalachicola.
2. "The Uses and Abuses of the Electrocardiograph," E. F. WAHL, Thomasville, Ga.
3. "Collapse Therapy in the Treatment of Pulmonary Tuberculosis," F. C. MOOR, Tallahassee.
4. "X-Ray Diagnosis," O. W. BRITT, Chattahoochee.
5. "Malaria," MARK F. BOYD, Tallahassee.

SECOND GENERAL SESSION

Senior Councilor Turberville in the Chair
New Business
Announcements
Adjournment

The preceding plans are an outgrowth of the meeting of the Council held in Orlando, June 24. The councilors who met last month have some very constructive plans outlined for extending and enlarging the work of organized medicine all over the state. In the past the Chairman of the Council or individual councilors have made an effort to extend the usefulness of the organization they represent but this seems to be the first constructive move of the entire Council as a unit to pull together in unified effort. A large portion of the responsibility and laborious work falls on the shoulders of the secretaries of component societies. This leadership and assistance by the councilors of each district will be welcome to those who have been carrying a heavy load in the past.

STATE NEWS ITEMS

Dr. Carl S. Lytle of Dunnellon and Miss Carolyn Endsley of Brooksville were married Sunday, May 30. Doctor and Mrs. Lytle will reside in Dunnellon.

* * *

Dr. Albert W. Lewis of St. Augustine has moved to Atlanta, Georgia. Doctor Lewis' local address in Atlanta will be 502 Medical Arts Building.

* * *

Dr. and Mrs. Robert H. Farringer of Hollywood will sail from New York for Vienna, Austria with Dr. George W. MacKenzie of Philadelphia for special work in otolaryngology for six weeks, after which they will tour through Italy, Germany and France. Mrs. Farringer will take a special course offered in the fine arts and music while in Austria. Doctor MacKenzie is taking a group of medical men with him from all sections of the country, all of them sailing on July 10 on the Holland American liner, Veendam.

* * *

The Twenty-second Annual Session of the American College of Physicians will be held in New York City with headquarters at the Waldorf-Astoria Hotel, April 4-8, 1938.

* * *

Dr. Maximilian Stern, Daytona Beach, left for New York the latter part of June. Doctor Stern expects to do some work in the hospitals of New York City and then to go to Canada for a vacation period, returning to Florida about the first of October.

* * *

Mr. and Mrs. Robert Hampton Wiggins of Jacksonville announce the marriage of their niece, Jewell Edith Wiggins, to Dr. Fauntleroy Harris Schnauss, Jacksonville, on June 5.

* * *

Dr. Irvin Abell, Louisville, Ky., surgeon, was chosen president-elect of the American Medical Association at its annual meeting held in Atlantic City, June 7-11.

* * *

Dr. Julius C. Davis of Quincy, President of the Alumni Association of the School of Medicine of Emory University, delivered his presidential address at the meeting in Atlanta, June 4, at the banquet. Other Florida doctors who appeared on the program were Dr. Homer Pearson of Miami who, on June 2, read a paper on "Prenatal Care" and Dr. Walter C. Jones who presented a paper on "Care of the Surgical Patient" on June 3. The meeting was held at the Grady Hospital, Atlanta.

* * *

The eighth annual meeting of the Florida Society of Dermatology and Syphilology was held in Jacksonville the week-end of June 6. A well attended skin clinic was held in the Duval County Hospital. Election of officers resulted as follows: C. A. Andrews, Tampa, president; Lauren Sompayrac, Jacksonville, secretary. Tampa was selected as the place of the next meeting which will be held October 20. In attendance were Drs. Elmo French, Wiley Sams and Rothwell Lefholz of Miami; C. A. Andrews and G. C. Bottari of Tampa; Alan Brown, J. L. Kirby-Smith, E. C. Swift, L. M. Sompayrac and J. F. Wilson of Jacksonville.

* * *

Drs. James M. Hoffman and Rudolph P. Stritzinger of Pensacola announce the removal of their offices to 1221 East DeSoto Street.

* * *

Dr. A. J. Logie, Director of the Bureau of Tuberculosis, Florida State Board of Health, has been recently elected to the American Academy of Tuberculosis Physicians and also to associate membership in the American College of Physicians.

The State Board of Medical Examiners held its semi-annual meeting in Jacksonville, June 14 and 15. One hundred forty-four applicants took the examination. Doctor Rowlett announced that the persons seeking licenses came from 32 states and the Dominion of Canada.

Dr. W. M. Rowlett, secretary-treasurer for 20 years and the veteran member of the Board, was re-elected to that office. Dr. J. C. Davis of Quincy was named vice-president of the Board. A complete report will be published later, after the Board members have had sufficient time to grade the papers.

* * *

IMPORTANT NOTICE TO DOCTORS

What kind of doctor are you? The public now has a legal right to know. Words or abbreviations clearly denoting the particular kind or branch of the medical or healing arts must appear in a conspicuous place at the entrance of your office or usual place of business. The lettering must be at least TWO AND ONE-HALF INCHES IN HEIGHT and ONE INCH IN WIDTH. Doctors are urged to see that they qualify without delay.

SENATE BILL NO. 154
A BILL TO BE ENTITLED

AN ACT TO REQUIRE PRACTITIONERS OF EVERY KIND OR BRANCH OF MEDICAL AND/OR MATERIAL HEALING ARTS TO PLACE AND KEEP AT THE ENTRANCES OF THEIR OFFICES OR USUAL PLACES OF BUSINESS WORDS OR PROPER ABBREVIATIONS DENOTING THE PARTICULAR KIND OR BRANCH OF THE MEDICAL AND/OR MATERIAL HEALING ART THEY ARE LICENSED TO PRACTICE.

A complete reproduction of the new law will appear in the August number of the *Journal*. Doctors are urged to comply with this new statute promptly.

* * *

A meeting of the two councilors and the secretaries of the component societies of the Northwest Committee District "A" was held in Marianna the latter part of June. Plans were completed for the first annual meeting of the doctors in this district. The meeting is scheduled for Thursday, July 15, at Apalachicola. The material for this Journal is now going to press so you may expect a full report of the meeting in next month's Journal.

* * *

In connection with the Designation Law which has just been put on the statute books by the last session of the legislature, our first observation of the effects was on the office door of the Chairman of the Committee on Legislation and Public Policy. The prefix, "Doctor," has been deleted and the greeting on the doctors' office door is now shown:

"J. C. Davis, M.D.
T. W. Griffin, M.D."

* * *

Dr and Mrs. O. E. Harrell of Jacksonville announce the birth of a son, Martin, on Monday, May 24, in St. Vincent's Hospital. Mrs. Harrell was formerly Miss Margaret Hughes.

* * *

Dr. M. C. Wilson of Miami sailed recently on the S.S. Roosevelt for London. He expects to spend some time in Germany, France, and Austria before his return.

* * *

Dr. C. A. Peterson and Mrs. Camille Burroughs Blanton of Jacksonville were married on June 16.

* * *

Dr. C. C. Collins of Jacksonville was recently re-elected chairman of the Duval County Board of Public Instruction.

* * *

A meeting of the Southern Railway Surgeons Association was held in Jacksonville June 8 and 9 and in St. Augustine June 10. Dr. W. A. Applegate of Washington is chief surgeon of the Southern Railway System.

* * *

Dr. L. Y. Dyrenforth of Jacksonville was recently elected to Associateship in the American College of Physicians.

* * *

Dr. James L. Chalker and Miss Mary C. Fore, both of Ocala, were married on April 14.

* * *

Dr. A. O. Morton and Dr. J. E. Harris of Sarasota sailed the early part of July for Vienna where they will do postgraduate work at the University of Vienna. Doctors Harris and Morton expect to spend two months abroad.

Fifty-eight members of the Florida Medical Association attended the recent meeting of the American Medical Association held in Atlantic City, June 7-11. Dr. Meredith Mallory of Orlando and Dr. Herbert L. Bryans of Pensacola represented our Association in the House of Delegates. Those who registered were as follows:

Bieker, Annette M., St. Petersburg
Black, M. Eldridge, Clearwater
Borland, James L., Jacksonville
Bransford, L. E., Jacksonville
Brown, Harold O., Tampa
Bryans, Herbert L., Pensacola
Chandler, J. R., Daytona Beach
Chapman, B. A., Jacksonville
Coleman, John A., Plant City
Collins, Chas J., Orlando
Dobrin, Max, Miami Beach
Doern, William G., Daytona Beach
Estes, J. L., Tampa
Feaster, O. O., St. Petersburg
Folsom, Spencer A., Orlando
Fox, H. H., Miami
Freidus, Elias, Miami Beach
Gwathmey, G. Tayloe, Orlando
Halton, Joseph, Sarasota
Hewlett, Frank W., Coral Gables
Hotchkiss, W. T., Miami Beach
Ira, Gordon H., Jacksonville
Jenkins, O. W., Chattahoochee
Klein, Lawrence A., Live Oak
Knowlton, R. H., St. Petersburg
Lynn, C. W., Orlando
Lytle, Carl S., Dunnellon
McCreary, A. B., Jacksonville
McEuen, H. B., Jacksonville
McPhaul, W. A., Jacksonville
Mallory, Meredith, Orlando
Mentzger, Claude, Miami
Mills, A. L., St. Petersburg
Mills, Herbert R., Tampa
Morton, Rosalie S., Winter Park
Murphy, Ralph D., St. Petersburg
Nichol, E. Sterling, Miami
Panettiere, Cayetano, Miami Beach
Perdue, Jean, Miami Beach
Quicksall, J. Braden, St. Petersburg
Quillian, Warren, Coral Gables
Richardson, Shaler, Jacksonville
Robertson, J. C., Chattahoochee
Sams, Wiley M., Miami
Shaw, W. McL., Jacksonville
Simpson, W. T., Winter Haven
Smith, Marvin, Miami
Sompayrac, Lauren M., Jacksonville
Sory, Bailey B., Palm Beach
Stewart, Joseph S., Miami
Stone, Alvord L., Tampa
Strumpf, Irving J., Jacksonville
Taylor, H. Marshall, Jacksonville
Upchurch, Noble A., Jacksonville
Wallace, Albert W., Miami Beach
Walters, Arthur L., Miami Beach
Welch, P. B., Miami
Withers, G. H., Miami Beach

* * *

Dr. A. R. Beyer of Tampa sailed for Europe the early part of July. Doctor Beyer expects to take two months' medical course in Vienna and will spend some time in Germany and France.

At the recent meeting in Atlantic City of the House of Delegates of the American Medical Association the two Florida delegates were appointed members of reference committees. Dr. Meredith Mallory of Orlando was made a member of the Committee on Hygiene and Public Health and Dr. Herbert L. Bryans of Pensacola was made a member of the Committee on Miscellaneous Business.

* * *

Dr. Joseph Halton of Sarasota won a prize in the golf tournament of the American Medical Association in Atlantic City. This prize was a $37.00 humidor.

* * *

Dr. Frank T. Barker of Tampa announces the removal of his offices to Rooms 514-15-16-17 Citrus Exchange Building, 205 Zack Street. Doctor Barker previously had his offices at 303½ Zack Street.

* * *

Dr. H. A. Barge of Miami has returned from a two months' trip to Georgia and Alabama. Dr. Barge attended his class reunion at Vanderbilt University the early part of June.

* * *

Dr. Jess V. Cohn of Hollywood recently spent several weeks at the Cincinnati General Hospital, doing research work in the neuropsychiatric field.

* * *

Dr. S. Marion Salley of Miami has recently returned from a brief visit in Tallahassee where he attended the wedding of his sister.

* * *

Congratulations to Dr. and Mrs. Duncan Owens of Miami Beach, upon the recent addition to their family—a girl.

* * *

Dr. Annette M. Bieker of St. Petersburg announced the removal of her office from the Power and Light Building to St. Anthony's Hospital, and her association with Dr. O. O. Feaster in the practice of radiology and physiotherapy.

* * *

Dr. F. A. Vogt of Miami has recently announced the removal of his offices to the eleventh floor of the Huntington Building.

* * *

Dr. Gail Chandler of Miami is vacationing in the Canadian wilds and other points west.

Dr. Charles L. Kennon of Miami spent his vacation in the western part of the United States.

* * *

Dr. Eugene C. Lowe of Miami returned recently from a short vacation.

* * *

Dr. E. J. Hall of Miami recently moved into his new clinic building on First Street.

COMPONENT COUNTY SOCIETIES

DADE COUNTY MEDICAL SOCIETY

The Dade County Medical Society has arranged for a new meeting place. Future meetings will be held in the Ingraham Building on the second floor. Members of the society feel that this is an ideal place to meet since it is in the downtown section and convenient for parking, etc. The regular meeting date of the Dade County Society is the first Friday in each month.

The regular monthly meeting of the Dade County Medical Society was held Friday, June 4, at 8:30 p. m. A number of good papers were read and discussed. The first paper was by Dr. Arthur Walters on "Modern Management of Diabetes Mellitus." The second paper was by Dr. Dan Amerise on "Recent Advances of Present-Day Treatment of Snake Bites."

A resolution was adopted by the society, urging the members of the City Commission and the city manager of Miami to retain the present city health officer, Dr. George N. MacDonnell. The society went on record as disapproving the removal of any health officer for political expediency.

* * *

DESOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the DeSoto-Hardee-Highlands County Medical Society was held at 8 p. m. Tuesday, June 8 at Wauchula. Dr. A. A. Poucher was the presiding officer in the absence of President G. H. McSwain.

Dr. J. R. Boulware, Jr., of Lakeland read a paper on "Pediatric Practice in South Florida—a Comparative Study." Those entering into the discussion of this paper were Doctors Kirkpatrick, Sirron, Boorom, Cline and Martin.

The attendance at this meeting was a favorable representation of the membership. The following members were present: Doctors Poucher, Chandler, Kirkpatrick, Spears, Boorom, McKnight, Bevis, Kayton and Martin. Visitors included Doctors Sirron of Sebring, Pyatt of Bowling Green, Morlan of Moore Haven, Boulware and Cline of Lakeland.

* * *

PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Pasco-Hernando-Citrus County Medical Society was held Friday evening, June 11, at Lacoochee. Dr. W. H. Walters, Jr., was host and a very delightful dinner was served at the "Bungalow."

Very interesting case reports were given by the following doctors: J. T. Bradshaw, G. R. Creekmore, S. C. Harvard, W. Wardlaw Jones and W. H. Walters, Jr. Dr. W. H. Cox of Brooksville attended as a guest and took part in the program. On motion made and carried, the regular July and August meetings will not be held. The September meeting will be held in Dade City on invitation of Dr. W. Wardlaw Jones. The following resolution was adopted by the society:

WHEREAS, God in His infinite wisdom hath seen fit to remove from our company one of our beloved members, Dr. Augustus B. Cannon, and

WHEREAS, Doctor Cannon was one of the organizers of and a member for years of the Pasco-Hernando-Citrus County Medical Society, and

WHEREAS, he by his winning personality and friendship did endear himself to each and everyone of his acquaintances, and

WHEREAS, he by his untiring efforts to do good in his chosen profession, was a great asset to his community, and

WHEREAS, we as members of the Pasco-Hernando-Citrus County Medical Society do feel deeply the loss of our beloved comrade,

THEREFORE, BE IT RESOLVED, that the Pasco-Hernando-Citrus County Medical Society express its sorrow in the loss of our friend; that a copy of this resolution be forwarded to his wife, and that a copy be spread upon the minutes of this society.

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PINELLAS COUNTY MEDICAL SOCIETY

A meeting of the Pinellas County Medical Society was held at the Clearwater Yacht Club on May 21. The principal paper presented at this meeting was "Practical Application of Vitamine D," by Dr. J. S. Hood.

The June 4 meeting of the Society was held at the Lions' Beach Club, Treasure Island, with ladies as guests. Swimming was enjoyed in the afternoon, followed by an old-fashioned basket picnic at 6 o'clock.

On July 2 the members of the Pinellas County Medical Society and the Pinellas Dental Society held a joint outing. During the afternoon the golfing doctors played the golfing dentists on the Pasadena and Lakewood Courses. Members and their wives who did not play golf enjoyed the beach facilities of the Pass-a-grille Beach Hotel where the golfers joined them for dinner at 6 o'clock. This was the second annual Medico-Dental outing.

* * *

SEMINOLE COUNTY MEDICAL SOCIETY

The regular June meeting of the Seminole County Medical Society took the form of a boat trip and barbecue. The St. Johns River was a very beautiful setting for the boat carrying the medical group and guests. The barbecue was held at Blue Springs, which was a delightful spot for the group who enjoyed the good food and hearty fellowship.

As guests on this occasion, members of the Orange County Medical Society and Dr. J. C. O'Dell, Jr., of Jacksonville, were entertained. In the late evening the party returned to the Sanford Municipal Pier with a unanimous vote that this was an outstanding occasion for the members and guests of the Seminole County Medical Society.

Words or abbreviations clearly denoting the particular kind or branch of the medical or healing arts must appear in a conspicuous place at the entrance of your office or usual place of business. The lettering must be at least TWO AND ONE-HALF INCHES IN HEIGHT and ONE INCH IN WIDTH. See page 66 of this Journal.

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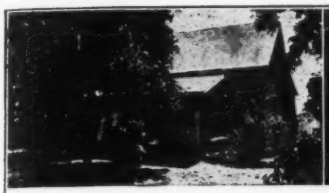

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My Dear Friends and Auxiliary Members:

For a lack of space in our column this month I shall not be able to give you a full detailed account of the fifteenth annual meeting of the Woman's Auxiliary to the American Medical Association, which was held in Atlantic City, New Jersey, June 6-11, 1937, with headquarters at the Traymore Hotel. But as soon as the minutes of this meeting are off the press, I shall see that each officer, chairman, and county president gets a copy, which will give you in detail far more than I could possibly crowd into this article.

To be able to attend this Convention as your official representative was one of the greatest privileges of my life. I wish that every one of you could have been there to absorb some of the delightful inspiration and information that always comes from such a meeting. Mrs. Gordon H. Ira, Jacksonville, attended as an official delegate, and Mrs. Herrman H. Harris, Jacksonville, was an alternate.

The Auxiliaries of Delaware, Pennsylvania, and New Jersey were hostesses, and too much praise cannot be given those splendid women for their efforts in making our stay in Atlantic City one of comfort and enjoyment.

On Sunday evening a National Board dinner was given in the beautiful Belvedere room honoring our national president, Mrs. Robert E. Fitzgerald, at which time members of the Board were introduced and given an opportunity for a lovely fellowship together. They were delightfully entertained with a musical program and several monologues.

Monday was devoted to preconvention Board meetings. At noon an informal lunch-

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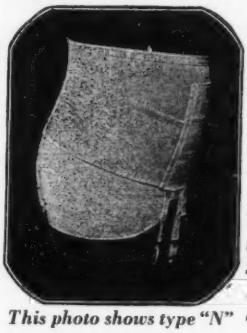

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GYNECOLOGY—Four Weeks Intensive Personal Course starting August 2nd. Two Weeks Intensive Course starting September 20th and October 18th.

FRACTURES AND TRAUMATIC SURGERY—Informal Practical Course; Ten Day Intensive Course, starting July 12th and October 11th.

OPHTHALMOLOGY—Two Weeks Intensive Course starting September 20th.

OTOLARYNGOLOGY—Two Weeks Intensive Course starting October 4th.

UROLOGY—General Course Two Months; Intensive Course Two Weeks, Special Courses Cystoscopy, Ten Day Course every two weeks.

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eon was served in the Submarine Grill. In the evening a "Get Acquainted Beach Party" was held at the Steel Pier where music, motion pictures, games and dancing were enjoyed.

Tuesday morning the annual Southern Breakfast, under the auspices of Mrs. Frank N. Haggard, president of the Southern Medical Auxiliary, was held in the Submarine Grill honoring Mrs. Robert E. Fitzgerald. Guest speakers were Dr. Frank K. Boland, president of the Southern Medical Association; Dr. Charles G. Heyd, president of the A. M. A.; Mrs. Samuel C. Red, Texas, first organizer of the Woman's Auxiliary; and Mrs. Robert E. Fitzgerald.

The general session of business opened at nine thirty Tuesday morning. The president, Mrs. Robert E. Fitzgerald, presided. She introduced the General Convention Chairman, Mrs. Carl Surran, who extended an official welcome and made several important announcements. Mayor C. D. White of Atlantic City was then introduced, and gave the welcoming address, presenting to Mrs. Fitzgerald the key to Atlantic City.

Many interesting reports were read by the officers and chairmen showing a marked increase in the activities of each department during the past year. There are more than 3000 new paid up members since last year, bringing the total membership up to 18,595. Special emphasis was given the New Record System, which all State and County treasurers are requested to make use of. The president's message was most outstanding. She attended five State Board meetings and eleven State conventions during the year, sending circular letters to all State Auxiliaries stating the aims and objectives of the organization.

At one o'clock a sea food luncheon was served at Hackney's Famous Sea Food Restaurant, where music was enjoyed and rolling chairs provided for the convenience of those attending.

Tuesday evening was open, so we attended the general meeting of the A. M. A. in the auditorium of Convention Hall. Dr. J. H. J. Upham of Columbus, Ohio, was installed as the new president The program of music by the Madrigal Singers, under Henry Hotz's direction, was very beautiful and impressive.

The Auxiliary's second general session of business was called to order on Wednesday

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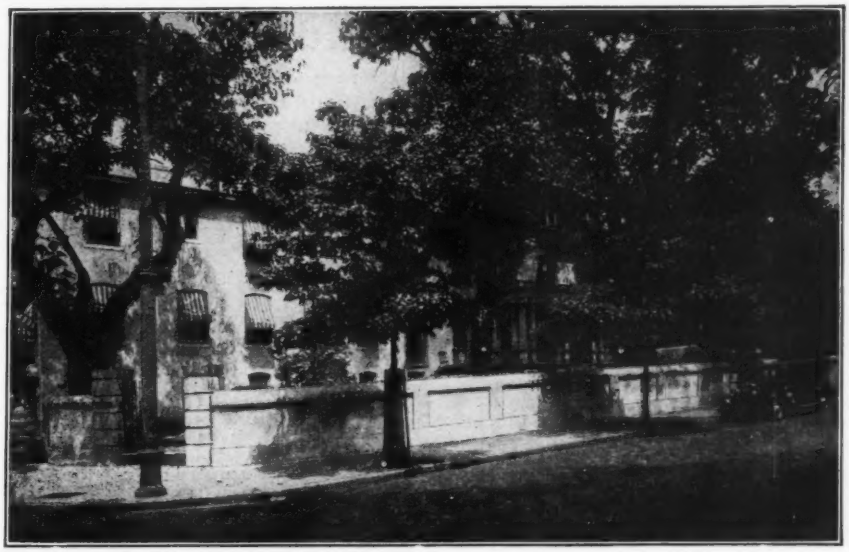

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morning by the president, Mrs. Fitzgerald. This meeting was given over almost entirely to State reports. It gave me great pleasure to read Florida's report of last year's outstanding work under Mrs. W. W. Harden, which reflected much credit to our State.

At one o'clock an Auxiliary luncheon was given in the American Dining Room. Luncheon music was rendered by the Traymore Trio. The principal speaker was Dr. Charles Gordon Heyd, president of the A. M. A. At four an "Exhibits Tea" was given in the Mandarin Room by Mrs. Ily Bier, chairman of exhibits, and her committee.

An evening of entertainment and refreshments was held in the American Dining Room on Wednesday night. Mrs. Franz Imhof was master of ceremonies.

A Postconvention Board meeting and group discussion were in progress Thursday, which proved a great benefit to the new presidents. A lovely luncheon and style show followed, and in the evening a most enjoyable "Bring Your Husband Dinner."

In summing up the whole convention meeting, "Self Education" was one of the highest points of discussion, and one which every doctor's wife should consider. In contacting lay groups, a doctor's wife needs to be well informed and tactful. The Auxiliaries are the doorways into lay groups. Women's organizations are knocking at the doorways and asking for guidance because communities and individuals are health-conscious. Therefore, the Woman's Auxiliary is the doorway through which the medical profession has an opportunity to enter and become the instructors, the guides.

(Mrs. S. M.) Minnie Ross Copeland,
President.

* * *

The State Auxiliary Board met June 24 with the Advisory Committee to the Woman's Auxiliary in Orlando's beautiful Orange Court Hotel. Mrs. S. M. Copeland of Jacksonville, as president of the Woman's Auxiliary, opened the meeting, and introduced Dr. Gordon H. Ira of Jacksonville, chairman of the advisory committee, who reviewed the Auxiliary's work for the past year. Among its accomplishments were the program for cancer prevention, examination of household servants for the control of social diseases, and

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the gratifying response to the essay contest on "The Problem of Ridding Florida of Tuberculosis" which was sponsored by the Auxiliary in the State high schools. In addition, Dr. Ira made suggestions for the new year's program which was followed by an enthusiastic round table discussion.

Dr. Edward Jelks of Jacksonville greeted the members as president of the Florida Medical Association. He expressed the appreciation of the Association for the work and high ideals of the Auxiliary, and asked cooperation in preserving the competitive spirit in medicine as conducive to the greatest public benefit and the advancement of science. Dr. L. C. Ingram of Orlando added his encouragement to the work the Auxiliary is doing in health education.

In her talk to the board, Mrs. Copeland stressed the importance of self-education to increase the value of Auxiliary work, and reported on the Auxiliary's meetings at the A. M. A. convention in Atlantic City, urging the local branches to send more delegates in the future to receive the inspiration and enthusiasm which these meetings give. She encouraged the members to listen to the radio health programs which are being sponsored by the A. M. A. over a nation-wide hook-up.

Following the meeting, the board was entertained with a delightful al fresco supper at the home of Dr. and Mrs. Frank D. Gray in Orlando. The members expressed their appreciation to Mrs. L. C. Ingram and her splendid committee of the Orange County Auxiliary for the gracious hospitality which they received.

* * *

An announcement of special interest to Florida Auxiliary members was the appointment at the national convention of Mrs. Gordon H. Ira, Jacksonville, as Historian of the Woman's Auxiliary to the A. M. A. It is gratifying to know that Florida again has a representative in the national affairs of the Auxiliary.

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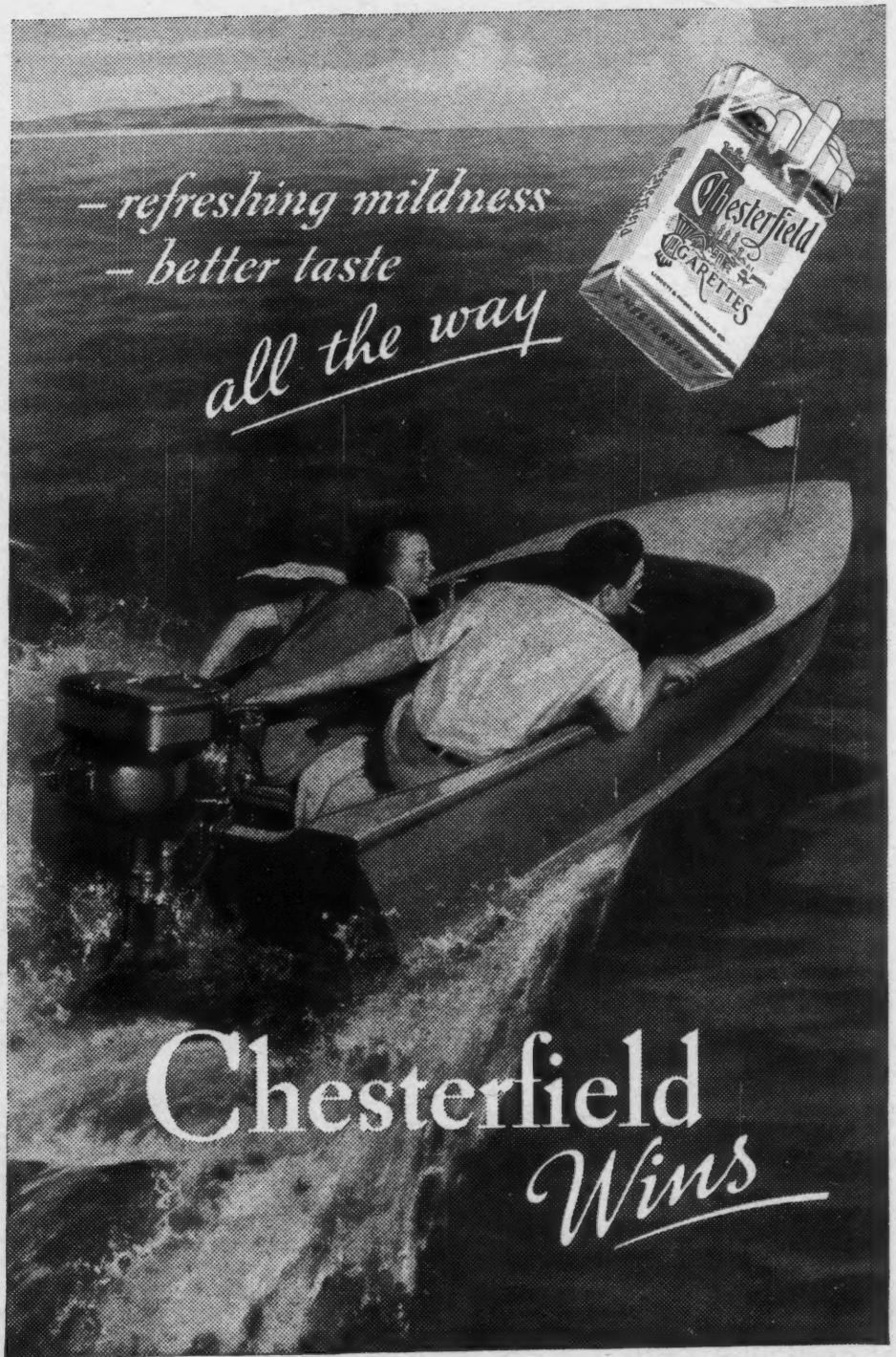

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